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ARE MADE BY  
THE WELD MFG. CO.,  
11 Lincoln Street, • • Boston.

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BUYERS' DIRECTORY LII.

*Cravenette*  
RAIN COATS

Must have this Circular  
Trade Mark stamped in  
inside of coat.



# INDIA RUBBER WORLD

CAOUTCHOUC

NEVER BRASS

GUTTA-PERCHA

Edited by HENRY C. PEARSON—Offices, No. 35 West 21st Street, NEW YORK.

Vol. XXXVI. No. 1.

APRIL 1, 1907.

35 CENTS.

\$3.00 Per Year.  
\$3.50 Abroad.

PAT. PENDING

THE ALLEN IMPROVED FOUNTAIN BRUSH

A BATH FOR BEAUTY AND HEALTH

Portable Bath Outfit in use

WRITE FOR CATALOGUE AND PRICE LIST

WILLARD E. ALLEN

THE ALLEN SAFETY BATH MAT  
PAT. DEC. 1ST 1903  
ONE YD. SQUARE  
HOLDS 4 GALLONS \$2.00  
BATHROOM OUTFIT  
\$4.80

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The ALLEN IMPROVED BRUSH is the acme of perfection, combining the excellent qualities of former styles with splendid new features.

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**Bathroom Outfits:** Consist of Brush with Hose and Bulb Faucet Attachment and can be connected with Bath Tub or Wash Bowl Faucet.

Our 1907 advertising campaign warrants dealers in placing liberal orders for these goods.

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THE ALLEN MFG. CO. 2009 Adams St. TOLEDO, O.



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SAMUEL CABOT, BOSTON, MASS.

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ESTABLISHED 1884

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NEW YORK, 136 Liberty St. BUY AND SELL  
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Under this cipher word we desire to introduce a high melting point material, well adapted for makers of rubber, electrical compounds, waterproofing, saturating materials, paints and cements.

This material is not to conflict with our Hydro Carbon, Mineral Rubber, Elastic Compound, and Compo Black in their several channels of consumption. Please write for prices and samples.

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Hose for all purposes by a new and improved process—made in any continuous length.

Vulcanized under pressure.

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EUREKA  
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In construction the most simple; in work, just as good as its construction is simple.

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Indispensable for Presses and Vulcanizers.

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Mention The India Rubber World when you write.

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### VISITING RUBBER PLANTERS.

THE rubber plantations in the far East are constantly being visited by persons from other parts of the world who are interested, or thinking of becoming interested, in the rubber culture in some other region. It is natural that the successful production of rubber in British Asia should suggest to planters elsewhere who may have taken up rubber later, the desirability of studying the practice there. And most commendable has been the spirit manifested by planters in Ceylon and Malaya in putting at the disposal of their visitors all the information desired. The Eastern planters have reached their present stage of advancement, not by having any secrets in practice, but through the liberal interchange of experience and views—a policy which we hope to see adopted generally.

We notice that, among others, the visitors referred to have included a number interested in planting rubber in Mexico. Some of these are likely to be disappointed, since the *Hevea*, the rubber tree planted in Ceylon, is very different from the *Castilloa*, planted in Mexico, calling for different treatment throughout, and yielding rubber of a different quality. What we should rather like to see would be an exchange of visits among the planters in Mexico, with a view to each gaining an in-

sight into what has been accomplished by all the others. They are all planting the same species, and, generally, whatever has proved a success on one plantation in Mexico is liable to be found worth while on the others. Not that we would discourage the widest possible study of rubber-planting problems, but it would seem of more practical value to know what is being done in one's own field than by planters of another species, under different conditions.

We do not know, by the way, but that the Eastern planters have yet something to learn about the treatment of *Hevea* rubber. The suggestion made at one time of sending from Ceylon to South America a commission to study rubber conditions there was met by the statement that everything necessary to be known about Para rubber could be learned by reading, and the expense of a trip was saved. It may yet prove desirable, however, for some of the rubber experts on the other side of the globe to go up the Amazon and study the "native" methods of dealing with the rubber species which they have placed under cultivation.

### HIGHER PRICE LEVEL FOR COTTON.

THERE is no question to-day of more general interest to the india-rubber industry than the course of prices of raw cotton. As we have pointed out recently, the industry has been obliged of late years to accustom itself to a new and higher standard of prices for raw rubber, and no one will be found now calculating upon the probability, at least for a long time, of rubber prices sinking to the level of ten years ago—83 cents for material now quoted at about \$1.20 per pound. The industry at present is confronted with the question whether a similar permanent advance is not to be experienced in respect of cotton.

The situation is so well outlined in a circular to the trade issued by Mr. Theodore H. Price, an important member of the cotton trade in New York, that we shall take the liberty of quoting from it: "The American cotton crop for the season ending August 31, 1906, was 7,147,000 bales, and was marketed at an average of about 7½ cents per pound. In the interval since, the production has nearly doubled, and we have about completed the sale of a crop of between 13 and 14 million bales, at an average of probably 10½ cents per pound. An increase of nearly 100 per cent. in the supply and a coincident advance of 30 or 40 per cent. in the price is an economic paradox which justifies the closest scrutiny of the conditions which have made it possible."

It is no longer possible to forecast the price of cotton by comparing the prospective yield of a growing crop with last year's production, and assuming that a larger output will mean lower prices as a matter of course. Nor do the various causes which formerly influenced, temporarily, a rise in prices suffice to account for the

advance which has occurred within two years past and is still maintained. There is, for example, "speculation" in cotton, but mere speculation cannot long maintain a material at a high price level if consumption is not keeping pace with production. This whole proposition has been illustrated fully in connection with the gradual advance in rubber prices to the present standard.

Some other features of Mr. Price's circular merit attention here. He asserts that no other single product of labor is so essential to civilized humanity as cotton, and the increase in the demand for it is coextensive with the spread of civilization, industry, and wealth; no other article of commerce is so promptly and easily exchangeable for gold. During 50 years past the "units of labor" involved in cotton production have remained practically unchanged, while labor-saving machinery has reduced the cost of production of most other commodities. But of late the value of "labor units"—i. e., a day's work—as expressed in terms of gold, has increased. In other words, the purchasing power of gold has become greater. In 1906 there was produced twice as much gold as in 1896, which fact must not be lost sight of in considering the advance in cotton prices in the same period.

Mr. Price predicts that in time an American cotton crop twice as large as at present will be viewed without alarm as no more than equal to the world's requirements, and already we seem to be nearing the time when 15,000,000 bales will be a necessity. And with the continued large production of gold, cotton at 20 cents a pound may yet seem reasonable.

In the above consideration no regard has been had to the production of other than American cotton. As our readers know, the culture of cotton is being encouraged by the European powers in all their colonial possessions which seem in any way adapted to it, but as we have shown recently, while progress is being made, it is slow. Meanwhile the use of cotton goods is on the increase in regions where formerly they were little known. Doubtless considerable cotton will be grown in West Africa within the coming decade, but a large production will be needed to offset the growing demand for cotton goods there. Great Britain alone exported to West Africa in 1904 cotton goods valued at £1,706,186 [= \$8,303,154], and in 1906 valued at £2,034,152 [= \$9,899,200].

We should be pleased, of course, to see the cotton situation work out more favorably for the rubber trade than the foregoing considerations indicate, but the trade will lose nothing by being prepared for a permanent high level for this commodity.

#### GROWING USE OF RECLAIMED RUBBER.

THE most important development in the rubber industry, since the discovery of the vulcanization process, has been in the reclaiming of rubber from scrap, or worn-out goods. Indeed, without reclaimed rubber, the industry as we know it to-day could not exist. While

the production of raw rubber has increased steadily from the beginning, the total amount available is hardly sufficient to afford material for all the rubber goods required.

Without the help of the reclaiming processes, the 130,000,000 pounds or more of rubber that enters into consumption in the world in a year would have to be thrown away after once having rendered a service, whereas now practically all rubber is capable of being used over and over again. The extent of the reclaimed rubber industry cannot be stated with accuracy, but careful estimates in the trade of the production of the 32 reclaiming plants in the United States point to the use in this country of two pounds of reclaimed stock for every pound of raw rubber. It is several years since the estimate was accepted that an equal amount of reclaimed and raw rubber was used. Since then improved reclaiming methods have come in, and wider uses found for the product.

The use of reclaimed rubber in other countries, though beginning later, has become very extensive. There is reason to believe that the collection of waste rubber in Europe is as general as here, not being confined to the 10,000 tons or more exported in a year to America. Most of the larger rubber factories abroad reclaim more or less rubber for their own use, in addition to the product of several important independent reclaiming plants.

At present prices the collection of every kind of waste rubber is worth while, and the pressure of the demand for reclaimed rubber makes it uncertain when lower prices will prevail.

#### TO IMPROVE CONGO CONDITIONS.

ON the eve of his departure for the Congo, to begin the work of exploiting the rubber concession granted recently to an American company, the general manager of the company is reported to have stated that, as soon as any center for their work was located, the first care would be to arrange for "the proper housing, feeding, and in general the health and comfort of the natives" they expect to employ. This statement is entitled to weight, not only from the fact that the company command practically unlimited capital, enabling them to carry out plans without regard to expense, but because their manager has had several years of experience in Central Africa and is familiar with the character of the natives, and with the local labor conditions.

In the opinion of the gentleman quoted, a great trouble with the employment of labor in Africa has been that the natives have been left too much to themselves, and, being improvident, they have never made provision for a season ahead, which doubtless renders their labor on the whole less effective than it might be otherwise. The American manager does not hope to change the nature of the natives, but, by fair treatment, to so gain their confidence as to bring their work under more systematic supervision than has prevailed hitherto.

We do not doubt that both in the Congo and the rub-

ber regions of the Amazon better methods of dealing with the rubber gatherers could be adopted, with the result not only of improving the condition of the natives, but of putting the rubber trade on a better basis. The results of the American company's efforts on the Congo will be looked for with especial interest, in view of the charges that have been made of cruelty to the rubber gatherers there.

#### A ROYAL PHILANTHROPIST.

THE King of the Belgians, after years of silence under widespread criticism of his conduct of Congo affairs, has lately seen fit to make public some statements in defense. This was done in the shape of an interview accorded by his Majesty to a representative of the New York news agency known as the "Publishers' Press," which has been widely published. It last appeared in a semi-official publication, *La Vérité Sur le Congo*, which indicates that the report of the interview is sanctioned by King Leopold.

To use the King's own words, "No one in Europe has been painted a monster in such blackness" as he; he has been described as "an ogre, whose chief delight is to order the torture of helpless African negroes." To which his answer is: "It would be absurd for us to illtreat the blacks of the Free State, because no state can prosper without its population being happy and increasing." There have been, his Majesty admits, cases of "misjudgment" on the part of the state's agents, white and black, but instead of attacking him, he feels that other powers would be "more philanthropic" in giving their support to his measures "for the benefit of civilization."

What will cause most surprise in the royal interview is the statement: "I am the ruler of the Congo, but the prosperity of the country no more affects me financially than the prosperity of the United States increases the private means of President Roosevelt. I have not a penny invested in Congo industries. I have received no salary for the work I have done, as the Congo executive during the past 22 years, and in no shape or form have I ever bettered myself in money through my relationship with the Congo Free State. On the contrary, I have spent large sums of my own in developing the country, sums that amount in the aggregate to millions of dollars."

The King says further that he has sufficient money for his wants, and cannot take money out of the world. "I am not a business man," he concludes.

Whether these very definite assertions will be accepted as a complete answer to the charges made against the Congo administration time will tell. But the interview doubtless will appear to some persons incomplete in that it fails to say who has pocketed the large profits made on rubber and other products of the Congo.

NEWS OF THE RECENT HEAVY SNOWFALLS in the United States cannot fail to be welcome on the Amazon. Not that any use for snow exists so near the equator, but the more snow up here, the more rubber shoes are worn, and the better the demand for the Amazon's great export staple.

THE RUBBER SITUATION AT MANAOS and its effect upon the market in London on the same date, reported by cable in a Ceylon newspaper of the following morning, is displayed as important news. It is at least interesting as showing how near together the different parts of the rubber world are being brought.

THE TERM "CRUDE RUBBER DISPLACERS," lately introduced into the trade by an enterprising British firm in their advertisements,

strikes us as being worthy of general adoption, as more appropriate than "rubber substitutes." One reason is that it is more accurate, there being, as a matter of fact, no such thing as a rubber "substitute."

THE MAYOR OF NEW YORK, in a recent address at a great university, illustrated the idea of elasticity by a mention of "gutta-percha." We were about to comment on the popular idea of the identity of gutta-percha and india-rubber, when a United States court judge decided, in a customs case, that "india-rubber" includes "balata," which other official decisions have practically made out to be gutta-percha. It may be just as well to defer further comment until all the public authorities have spoken.

THE DEFINITION OF "INDIA-RUBBER, CRUDE," by Judge Hough which admits balata free of customs dues, would apply, so far as we can see, to chicle gum—particularly if it should be intended for use in the manufacture of "rubber goods."

#### OBITUARY.

IN the death of JEAN VILBOUCHEVITCH, in Paris, on January 27, the cause of scientific agriculture, not only in France and her colonies, but generally, and in the tropics in particular, suffers a distinct loss. Monsieur Vilbouchevitch for a number of years had devoted special attention to the development of the rubber culture, both in the pages of the admirable *Journal d'Agriculture Tropicale*, which he founded in 1901, and through personal relations with many leaders in the planting interest. An important work was his translation and enlargement of Dr. Warburg's "Die Kautschukpflanzen und Ihre Kultur." Monsieur Vilbouchevitch was born June 24, 1866, at Bielostok, Russia, and was educated in his native country and at Paris. He began early the study of scientific agriculture, and became attached to the Russian ministry of agriculture. Since 1895 he had resided in Paris. It is gratifying to know that the *Journal d'Agriculture Tropicale* is to be continued.

#### RUBBER SMUGGLING IN BRAZIL.

THE falling off in the revenues of the state of Amazonas since 1904 is explained by Governor Nery, in his last annual message to the legislature at Manáos as being due to an organized system of smuggling, by which a great amount of rubber-produced in the state escapes the payment of export duties. In May, 1905, the federal government of Brazil, having assumed control of the Acre district, installed three prefectures there, with a new fiscal system. The export duty levied on rubber being much lower than in Amazonas—in which state the Acre rubber formerly was taxed—it is asserted by Governor Nery that much rubber now produced in Amazonas is taken up the Purus and Jurua rivers into the federal district and sent to market as Acre rubber.

In the first year of the new Acre regime, according to the official figures, the rubber shipments amounted to 2,260,000 kilograms, and last year to 8,266,987 kilograms. The collection of the latter amount, Governor Nery says, would have been impossible, with the limited population of the Acre, and the figures are given as conclusive evidence of smuggling, together with the fact that the amount of rubber taxes at Manáos has been falling off.

THE will of the late Baron de Marajó, a distinguished citizen of Pará, whose death has been reported in THE INDIA RUBBER WORLD, disposes of an estate valued at 600,000 milreis (= \$206,826.25), among seven heirs.



## THE INSULATION FIELD.

### PROCESS OF FIREPROOFING CONDUCTORS.

A PROCESS of making fireproof conductors, for which a patent has been issued to A. M. Lougee, consists in coating the conductor wire with a cover of approximately pure rubber, to which are applied several vulcanizable coatings containing insulating and fireproofing ingredients with increasing proportions of the latter in successive coatings. A closely fitting woven wire jacket is next applied, and outside of this a highly heated, thin, vulcanizable, fireproof and electrolysis proof insulating compound. The latter is applied a number of times, until the heated compound has permeated the meshes of the wire jacket and become thoroughly incorporated therewith about the individual strands and on both sides of the jacket. Finally a heavy coating of vulcanizable fireproofing compound is added, and the whole vulcanized together.

### FIREPROOF INSULATED MAGNET WIRE.

THE problem of heat resisting magnet wire has been the study of years. Asbestos has been the basis for the insulation of wire of this class mentioned, and inventors long have been trying various methods of applying asbestos paper or twine to wire. The paper or twine is held upon the wire in most cases either with cotton thread or a heavy coating of organic paint. But while admirable otherwise, cotton is incapable of resisting continuously a temperature much above the boiling point of water.

The Heany fireproof insulated magnet wire is the latest form produced. It differs from previous attempts inasmuch as the asbestos is used in the fibrous condition, without being worked into twine or paper. The fibers of asbestos are applied in a filmy condition to the conductor, and then saturated with an inorganic cement which forms a homogeneous, durable, flexible, uniform covering, in the nature of a paint which can be built up from a thickness equivalent to a single wrap of cotton to any desired diameter. The result of this structure is to produce an insulation that cannot be destroyed by heat, no matter of what degree.

Cotton wound coils may burn out in different ways, but what most commonly happens is the gradual carbonizing of the cotton, rendering it friable and conducting. With fireproof insulation the gradual roasting is obviated, and in consequence the coils have an almost indefinite life instead of from six months to a year, which seems to be the average life of a street railway field coil. This gradual roasting is the fate of any insulation that contains a large percentage of organic matter, whether it also contains asbestos or not.

### TWO NEW INSULATING COMPOUNDS.

A NEW insulating compound for which a patent has been granted to Samuel G. Penney is referred to as having the advantage of being durable, fireproof, capable of being readily prepared and easily applied, inexpensive and efficient as an insulator. It is stated that it will resist concussion and vibration imparted to the metal to which it is applied and may be as conveniently and effectively used in repairs as in original application. The compound consists of fibrous asbestos, comminuted mica, a double silicate of soda, and a solution of soap, and is especially designed for insulating metallic surfaces by direct application to the surface of the metal.

The silicate is created a double silicate by the addition of about 15 to 20 per cent of a strong solution of lime, thereby making the silicate impervious to water or any chemical change. It is also treated at the same time and in the same manner to a 15 or 20 per cent solution of soap shavings dissolved in hot water, which chemically changes its stiff character into pliability. The metallic surface is first coated with the silicate thus prepared, over which is then given a coating of the asbestos, which is then allowed to dry, after which a coating of the prepared silicate is again given, followed by a coating of comminuted mica. After this has dried as many additional coatings of the mica and asbestos may be

given it as may be desired, dependent upon the insulating effect and insulating property needed. An outside or finishing covering or coating of paint or liquid tar paint neutralized with a 10 per cent lime solution, may then be given.

Another patent issued to Mr. Penney relates to an insulating compound that may be applied either as a paint, varnish or paste to bond paper, cotton cloth, metallic surfaces or wherever a coating of insulated compound is required, and may be used either as an air drying varnish or it may be baked on the material to be insulated in a suitable oven. As a varnish or paint the compound consists of maltha, 20 per cent; byerite, 30 per cent; benzin, .12 per cent; carbon tetrachlorid, 38 per cent. In compounding these ingredients the maltha and byerite, together with a little colophony to act as a flux, are placed in a receptacle and subjected to heat until fused, and then while still hot the benzin and carbon tetrachlorid are added. The compound is then allowed to cool and is drawn off. A convenient form of maltha is ordinary asphalt.

### ELECTRICAL TRADE NOTES.

NEW YORK has now a well equipped laboratory for the special testing of india-rubber and gutta-percha covered wires, both for conductivity, insulation resistance, and tensile strength. Indeed, when it comes down to the latter quality, the work is not confined to insulated wire, but broadens out into the general line of mechanical rubber goods. The headquarters of this insulation institution is the Electrical Testing Laboratory, at Eightieth street and East End avenue, New York.

Linen tape for all the varied uses of the electrician is being put on the market by M. W. Dunton & Co., of Providence, Rhode Island.

As showing the excellence of Okonite rubber insulation it is interesting to know that the plain insulation, without any protective covering whatever, is soaked three days in water before being tested.

In answer to an inquiry, the Bishop Gutta-Percha Co. (New York) are not only remarkably well equipped for all kinds of gutta-percha insulation, but they make a very high grade rubber insulation as well.

Johnson & Phillips, Limited, of the Victoria Works, Charlton, Kent, England, are out with a signed invitation, which bids anyone interested to come to their great cable works and see the whole process of insulated cable making from start to finish.

The Dickinson Manufacturing Co., formerly the Dickinson Hard Rubber Co. (Springfield, Massachusetts), are very largely increasing their output of composition devices for an innumerable variety of insulating purposes.

The National Wire Corporation (New Haven, Connecticut) has been placed in the hands of receivers. This was on the request of the holding company, the National Steel and Wire Co., a Maine corporation. The temporary receivers appointed were Henry L. Hotchkiss, president of The L. Candee & Co. (rubber manufacturers), and Homer Wise, of New York. The permanent receivers, appointed January 4, were H. Stuart Hotchkiss and F. B. Farnsworth, both of New Haven, under bonds of \$150,000 each. The liabilities are reported at \$300,000.

The installation of the new Summer lane station, in connection with the electricity supply of Birmingham, England, lately completed, is a very notable piece of work. The cable work was carried out by Callender's Cable and Construction Co., Limited. The direct current cables are insulated with vulcanized india-rubber and fireproofed with asbestos braid. The alternating current cables are of the three core, paper insulated, lead covered, armored type, and have a subway to themselves.

The St. Helens Cable and Rubber Co., Limited (Warrington, England) advertise that they have made very favorable contracts for raw rubber for the season of 1907 and are going to give the benefit of it to their tire customers.



## A Journey Through Guayule Land—II.

By the Editor of "The India Rubber World."

### THE TRIP IN DETAIL.

WHEN one has a bad cold and it is raw and snowy in New York, the prospect of a visit to the Southland is most agreeable. Those were the conditions when, bundled in winter clothing, I boarded the train and made my start. The next morning, at breakfast somewhere in Ohio, we were two hours late, with the outlook dreary, for the fields were still snow covered, the sky cloudy, and the air full of a chilly fog. We dined in Indiana, and although we lost the snow there, the clouds, the fog, and the leafless trees, together with the flat muddy stretches of country, did not cause the joy of spring to course through our veins. We reached St. Louis three hours late, but through the



MOUNTED MEN PROSPECTING FOR GUAYULE.

assistance of the "ushers," called porters elsewhere, caught our train and felt at last as if the start was made.

The next morning, as we cautiously ran through Arkansas, I made the acquaintance of Mr. W. T. Selleck, a brother of H. D. Selleck, of New York, well known as the holder of important rubber concessions in South America. Although a Mexican mining man, he knew much of guayule, and we put in a pleasant forenoon discussing it. Reaching San Antonio, Texas, it was quite springlike and I began to consider summer clothing. Before I reached the point of changing, however, a "norther" came up and I was glad to remain clad as I was. Did I mention that we were seven hours late reaching San Antonio? That, together with the bad buffet service, was the first real suggestion that we were nearing the land of manana. Down through the flat plains of Texas, by dun colored adobes, through vast stretches where only the mesquite grows, we crawled toward Laredo. At Pearsall the engine gave out and we waited four hours for another. Sitting on the freight platform, with the hot sun baking my knees and the chill of the norther in the back of my neck, I was approached by a passenger of solemn and respectable mien who saved me from death, through weariness, although he didn't know it. He had a mine, with stock to sell, which he broached later. But as a preliminary, and to prove his absolute honesty in word and deed, he told of adventures with Indians and bad men, of peril from fire and flood, of mineral discoveries and development, until I knew that he was a genuine Buffalo Bill and John Hays Hammond combined. He was, I think, about to show me his collection of knife wounds, bullet holes, and samples of ore, when I

heard guayule mentioned by a man near by and, therefore, broke away. I am sorry now, for if my memory serves me right \$100 worth of that stock would be worth within two years \$563,247.13.

Talk about your luck!

The guayule mention came from another American who lived across the border and who asserted with all confidence that the white sage of Colorado, known as the "winter cattle feed," was one and the same with the plant from which the rubber was obtained. He said that he had extracted rubber from it himself, and gave me addresses of Colorado men who could substantiate his story.

When the new engine at last arrived we entered the smoker and continued the conversation in the presence of a very hilarious bunch of Shriners on a pilgrimage to Mexico City. Then came up the question of the discovery of the rubber in the plant. The solemn man, he of the stab wounds and bullet holes, believed that the shrub chewing Indians first made it known. The Shriners, on the other hand, held that the rubber eating goat should have the honor. Indeed, before we parted they promised to have a hard rubber tablet set into the wall of a shrine in Colorado adorned with the following:

### THE RUBBER GOAT.

Patter, patter, little feet,  
As you search for food to eat,  
Cactus, sage brush, cast-off shirt.  
Nothing could your stomach hurt.  
'Till you browsed on gray guayule,  
Which it killed you, pronto, truly.  
And it was your prompt post mortem  
That, and nothing else, that taught 'em  
How to take this desert shruber  
And turn it into d— good rubber.  
Thus your masters' fortune win,  
Just because you "butted in."

### MEXICO REACHED.

THESE and other pleasantries helped time to fly until we reached Laredo at 10 P. M., crossed the Rio Grande at 11, and, after a brief examination of luggage and an exchange of our money into Mexican on a basis of 2 for 1, we felt that really we were in the rubber land. To be sure, it was cold and everyone was coughing,



REST FOR LUNCH IN GUAYULE LAND.

but we were in the summerland for all of that—the railroad guide books said so.

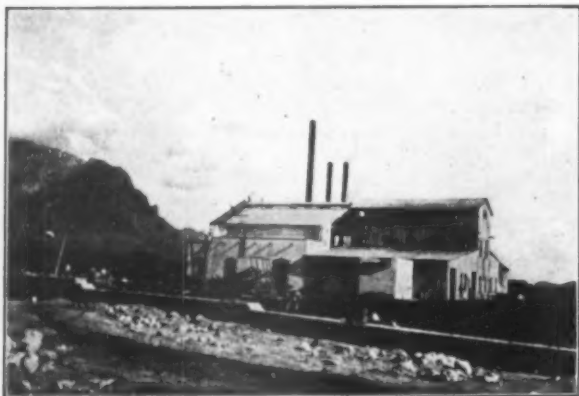
... we were in Monterey, and a two-mile drive to the center of the city landed me at the Windsor Hotel. This



FIRST GUAYULE FACTORY OF L'ANGLO-MEXICANA (1898) AT SAN LUIS POTOSI.

is the best or the worst in the city, and the others are equally so. Still I had a funny little sheet iron stove the size of a hatbox in my room, and managed to be comfortable. Indeed, as I looked out of the casement and saw the tourists shivering in great coats and furs and the natives muffled to the neck in blankets, I felt pretty well fixed.

Later, when the clouds rolled away and the lovely situation of the city in a level valley surrounded by hills and lofty mountains unfolded itself, all discomforts were forgotten. There was the Cerro de la Silla, for example, towering more than 4,000 feet



PIONEER FACTORY AT JIMULCO. (L'ANGLO-MEXICANA, 1902.)

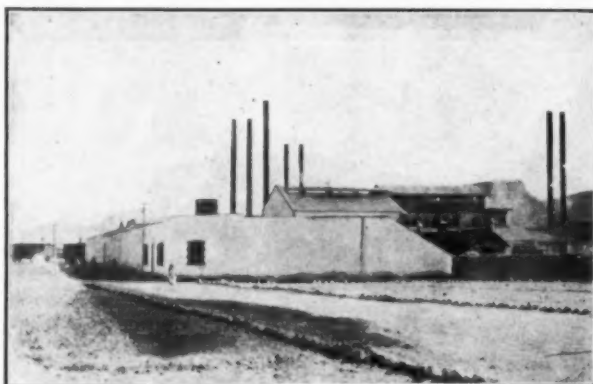
above the plain, a perfect Spanish saddle in distinct outline against the sky. Then, too, the Cerro de las Mitras, nearly as high, shows to those who can see it the miter of a bishop. Three miles from the city proper are the Topo Chico hot springs, with their Aztec legends of wonderful cures. Besides, there are faint reminders of the American occupation during the Mexican war, and more pronounced evidence of the present occupation in the shape of great smelters and factories, and the ease with which the English even of the American tourist is understood.

I was fortunate in having a letter to Ernesto Madero, who resides in Monterey, and who is of the Madero family whose

guayule holdings both in vast ranches on which the shrubs grow and in factories for its extraction are very large. A cultured gentleman, educated in the United States, he spoke English perfectly, and arranged for me to visit their factories and ranches with the utmost willingness and courtesy.

#### GUAYULE FACTORIES AT SALTILLO.

THE nearest Madero factory was at Parras, on the Coahuila al Pacifico, and directly on the way is the city of Saltillo, where are situated two of the factories of the Compania Explotadora de Caucho Mexicana and one of the Continental Rubber Co. So I left at 2.20 to be sure and catch the 3 o'clock train, which leaves at 3.20, and which actually got away at 5.30. We arrived at Saltillo at 9.15 and went to the Coahuila Hotel, a really fine modern structure with elevators, electric lights, baths, and so on. The elevator, to be sure, was used as a storeroom for rubbish, the bath was without water, and part of the time I used a candle for



PRESENT FACTORY OF L'ANGLO-MEXICANA AT JIMULCO.

light, but I had lost the finicky attitude that New York breeds and restfully accepted these little defects as a matter of course.

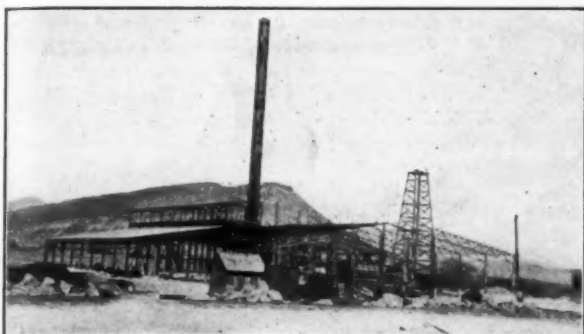
The altitude at Saltillo (pronounced, by the way, Sal-tee-yo) is close to 6,000 feet. For the first time in my life I noticed its effect in my breathing, and that only when going to sleep. The second night, however, the feeling disappeared and I had no further trace of it.

The city, quaint, ancient, once the center of the beautifully colored zerape industry, is the capital of the state of Coahuila, which once embraced the whole of Texas. There isn't much of interest except the beautiful carving on the stone front of the cathedral, and the aqueduct that makes life possible by bringing water from the far distant hills. In the morning I visited the American consul, Mr. Victor L. Dahiame, who by letter had already given me information of value. After a chat and a look at his guayule records I told the coachman (so called in courtesy) to drive to



PILES OF GUAYULE SHRUB AT JIMULCO.

the *fabrica de caoutchouc*. Through crowded streets, the driver ringing his big bell, cracking the whip, and hissing at his so-called horses, we rattled and bumped to the Anglo-Mexicana office, which was closed. Then I, by sign language chiefly, indi-



L'ANGLO-MEXICANA FACTORY AT SALTILLO, FOR NEW PROCESS.

cated that the factory would do. When once his Aztec intellect grasped my meaning he grinned delightedly, drove across a dusty expanse that was part road and part ten acre lot, waited ten minutes for an engine that had elected to die on a crossing, then across a hard mud plateau over which any one of a dozen wagon trails was equally good, down a steep bank and through a partly dry river bed, up a steep bank and we were in front of the fine



OFFICE BUILDING OF L'ANGLO-MEXICANA, AT SALTILLO.

new office building of the Anglo-Mexicana. By the way, I forgot to say that a local dentist on the way out stopped me and said that if I was buying guayule shrub he could put me onto 2,000 tons. I offered him \$10 (gold) a ton delivered in New York, but I didn't get it. Indeed, the dentist seemed annoyed over something and made remarks derogatory to my intelligence, and suggested a desire to remove my "block" by knocking it off.

The factories of the Anglo-Mexicana showed up as one finished and running full blast and another about two-thirds finished. Very soon I met Mr. W. F. Rutherford, the mechanical engineer, and Mr. H. G. Gunther, the superintendent. Dr. Adolpho Marx,

one of the owners and the gentleman in charge of these factories and of another at Jimulco, owned by the same company, was absent in the City of Mexico, where he makes his home, so I did not have the pleasure of meeting him.

The factory in operation has a power plant consisting of four boilers and a 350 H.P. engine, a rope drive being used to convey power to the various machines. Mr. Gunther said that the process was purely a mechanical one. They were running night and day, using 160 men for both shifts. All of these were Mexicans, the two Americans named above being the only aliens about the place. The new factory will be practically a duplicate of the old one in size and capacity, and will be running in the course of a month. In addition to the new factory the company has just completed four adobe store houses, 70x40 feet and 25 feet in height, for the storage of the shrub, and are adding 39 adobe houses for the workmen and their families. The situation of the plant is ideal, as there is plenty of water, and the drainage from the big vats where the fiber is deposited after extraction is excel-



FACTORY OF OTON KATTERFELDT, AT GOMEZ PALACIO.

lent. Of the two young Americans who run this, Gunther was formerly employed in large flouring mills near Minneapolis, and later in guayule extraction at Gomez Palacio, while Rutherford was with Westinghouse, Church, Kerr & Co.

As the sun came out in the afternoon, in spite of the local prophecy, I drove again to the factory and succeeded in getting some excellent views of the works. Early the next morning, after compromising with the hotel keeper for 75 cents on the dollar, with the help of a traveling man who spoke fluent Spanish, I started for Parras.

The ticket agent had no change at all, so I boarded the train anyhow, getting a seat in the first class half of the combination



INTERIOR OF THE OTON KATTERFELDT FACTORY, GOMEZ, PALACIO.

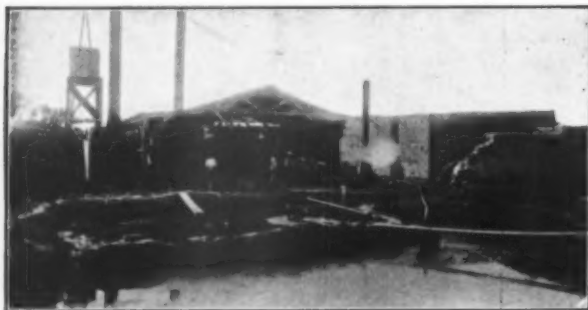
car. By 9 o'clock the sun shone gloriously, and I could well believe all the nice things that had been told me about the climate. The railroad ran through a dry valley plateau, from 2 to 10 miles wide, fringed with lofty and picturesque mountain ranges. Here and there were lonely haciendas, about which were huddled



native huts. Occasionally we came near to cart roads along which passed creaking carts, flocks of goats, or *sombrero* clad horsemen.

#### PARRAS AND THE MADEROS.

At 2 o'clock we steamed into the station at Parras. Here, to my surprise and joy, we met Mr. Elliott W. Knight, a Massachusetts "Tech" man, formerly employed in a well-known rubber laboratory in the States. He informed me that he was the superintendent at the Madero factory, or more exactly, at the factory of the *Compania Explotadora Coahuilense S. A. (fabricantes de hule en grande escala)*. Mr. Salvado Madero also welcomed me, and in spite of my protests—weak ones—that I intended to go to



GUAYULE FACTORY OF CHARLES J. MCGREGOR, AT TORREON.

the Hotel Walter, secured a coach and installed me in the *Casa de Knight*, which, being translated, means the exceedingly comfortable home of the Knights. After being welcomed by Mrs. Knight (a Boston girl), and a brief introduction to the family pets, consisting of a dog, a tiny pig, and a deer, we drove to the factory, talking guayule all of the way.

We spent several hours going over the factory and discussing rubber in general and guayule in particular, and then returned to the Knight homestead. There I enjoyed the best dinner that I ever had in Mexico and it ended with real old fashioned strawberry shortcake, crisp, sweet, delicious.

The next morning we drove to the outskirts to the foot of a steep hill that rose out of the plain, where on top of the hill was a huge rock, and in turn on the top of that the tiny chapel of Santo Madero. A very steep pathway led up the hill and up



PARRAS FACTORY OF THE CIA. EXPLOTADORA COAHUILENSE, S. A.

stairs cut through the rock to a little courtyard that fronts the chapel. When a native has sickness in his family he lights a candle and starts up the hill on his knees. If the candle burns all the way up the sick one will recover. It is then up to him to paint a picture with his own hands and hang it in the chapel. In the past many have won the ascent successfully, painted and hung their pictures, and the result is the most unique art gallery in the

world. They are indescribably funny, marvelously pathetic, and in some instances show real talent. But no money could buy the least of them.

Leaving the chapel we went again to the factory, where I met the founder of the Madero family, Don Evaristo. He is nearly 80 years old, a fine large hawk-eyed Spanish gentleman. Starting with nothing he became one of the largest landowners in Mexico, and his three sons and one nephew, who attend to the active business now that the senior has retired, are interested in banks, mining, railroads, and largely in guayule. As showing the troublesome times through which Don Evaristo came, it is well to cite the fact that for years he kept 800 men under arms and to-day the guns are stacked in a warehouse of his in Parras. His home is here and he not only owns about half of the city, but nearly all the land for leagues around.

The journey to Torreon was through much the same sort of country that I have only just described, but a bit wilder in parts. Game seemed very plentiful. From the rear of the train I saw blue quail, rabbits, and deer, and in the irrigation canals and ponds thousands of ducks.

Our stop at Viesca was very brief. Here are two of the factories of the Mexican Crude Rubber Co. They lie on the out-



FACTORY OF LA INTERNACIONAL MEXICANA COMPAGNIE GUAYULERA, S. A., AT TORREON.

skirts of the pretty little town and one of them is, or was, a smelter owned by the Coahuila Mining and Smelting Co. Both plants are exceedingly well situated as far as abundant water and railroad facilities go. The plants are running night and day and turning out a good quality of rubber under processes said to be original with the company. The same company operates a third plant at Cedral.

#### THE INDUSTRY AT TORREON.

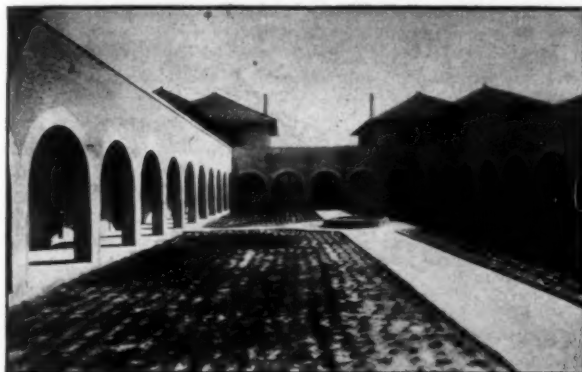
TORREON, the newest of all the Mexican cities, has a history dating back only about 20 years. It is built wholly on the mineral development of that part of the country. It contains perhaps 18,000 people, is 2,000 feet lower than Saltillo or Parras, and is hot and indescribably dusty. I stopped at the Salvador and as it was evening when I arrived put in three hours hunting for a good place to eat, incidentally sizing up the Mexican and American inhabitants. With its saloons, noise, dust, blaring music, gambling joints, and buildings in the course of construction, it is not unlike the typical American mining town during a "boom." It surely is a busy place, and fascinating with all its crudeness.

They told me in New York that the Continental factory was close to the end of the street car line, so I did not take a carriage. The car stopped at a smelter and far in the distance beyond was the plant I sought. So I waded through dust often ankle deep until finally I stood on the portico that belongs to the elegant



administration building of the company. A handsome young Mexican met me there with a polite bow and a question in Spanish. The story of my visit there is best told by the fine illustrations that I am able to give of the factory.

I don't think I mentioned it before, but in the past guayule, because of its rubber, resin, and oil content, was highly prized as a fuel. Indeed, very much smelting was done with it. A friend



COURT IN THE ADMINISTRATION BUILDING OF THE CONTINENTAL-MEXICAN FACTORY.

figured that for years the Guggenheims in their great Mexican smelters had unknowingly burned up \$500,000 worth of rubber, or about 10,000 tons of shrub.

After lunch at the officers' mess at the Continental, the *cocho grande* took me to the neat guayule factory of Mr. Charles J. McGregor, situated not far from the works already described. The owner is a young American who was formerly employed by the Standard Oil Co. in Chicago as candle manufacturer. Becoming ambitious he came to Mexico and started up a candle factory of his own at Aguas Calientes. He couldn't compete with the product already on the market, and ere long his light went out. Then he came to Torreon and embarked in the dairy business. While following this calling he met a young Californian, Mr. A. S. Valdespino, who interested him in guayule, to which he now devotes all of his time. His plant covers about 1½ acres, the product going to Hamburg and Antwerp.

The Delafond Rubber Co., another small factory in the outskirts, I did not visit, as it has not been operated for some months.

A brown skinned coachman with much whip cracking took me next to the factory of La Internacional Mexicana Compagnie Guayulera, S. A. Mr. A. S. Valdespino, the head of the concern, was absent, for which I was sorry, as he is credited with having

had quite a finger in the guayule pie. For example, he was connected with the factory at Viesca, is said to be interested in the Saltillo plant, he started McGregor, and has an interest in the newly projected Torres factory at Gomez Palacio. (Torres was formerly with Pena and is in the Banco Minero at Gomez Palacio), Mr. R. C. Bean, a six-foot Yankee, however, did the honors, showed me the factory, and answered many of my questions with the greatest frankness. He was, by the by, very pronounced in his preference for the European market as against the American. He said he got better prices, and there were fewer kicks and claims, and the settlement was always in the form of a draft against bill of lading. He estimated his product at a ton a day.

#### GOMEZ PALACIO VISITED.

THERE are at present two factories at Gomez Palacio, with a third one in prospect. To get there from Torreon stand on the sidewalk opposite Sternau's, the only good place to eat in the city, and when an electric car comes along board it and say, "Por Gomez Palacio?" The conductor then says, "No, señor; especial," and you get off and wait another half hour. Then when a car for the elect, with two trailers for peons comes, take a seat, and in due time you will be landed in a dreary plain in a muddle of adobes, saloons, and freight cars. Far in the distance, you spy a factory. "Fabrica guayule?" you ask of a passing *mozo*. "Si," he replies, which means "yes," and has no reference to the patronymic Silas or to the gusty aspiration with which you view the dusty tramp in prospect. Nearing the factory the roar of the pebble mills and the unmistakable smell of the crushed shrub prove the correctness of the diagnosis.

This is the National Rubber Co. (Fabrica de Hule National), and is presided over by Mr. William Magenau, the general manager. It is financed by capitalists in San Antonio, Texas, and, by the way, they claim to have shipped considerable Texas shrub to this factory and to have got a good percentage of rubber from it. Mr. Magenau, who was a mining engineer, early took an interest in guayule, and is running his factory under the Bergner patents. His product is sold direct, partly in the United States and partly in Europe.

While going over the factory he told me of an amusing instance of Mexican official interference. It seems that a guayule factory, like a rubber reclaiming plant, is too odorous a neighbor to be gracefully tolerated. The smell to which some object comes chiefly from the great vats in the yard where the *bagasse*—the waste fiber—is pumped to dry out and be used for fuel. The city fathers of Gomez Palacio ordered Mr. Magenau to put lime in the mess. Luckily he tried the experiment on a small scale first, and let loose a smell that would make sulphurated hydrogen seem like rose attar in comparison. So they didn't insist.



ADMINISTRATION BUILDING OF THE CONTINENTAL-MEXICAN RUBBER CO., AT TORREON.



HUNTING THE GUAYULE PLANT.

Another manufacturer, however, in his zeal to avoid civic conflict, did it on a large scale, and drove half the native population to the hills as a result. Speaking of this refuse, it makes a good fuel even wet, and all of the manufacturers burn it to an extent. Indeed, if it did not decrease the cost of fuel, a large plant would be forced to burn it to get it out of the way.

One of the pioneers in this new rubber industry is Oton Katterfeldt, whose factory lies on the other side of the town. I will not weary the reader with the description of the circuitous route over which my ten-year-old driver took me in the attempt to

reach the "*Otro fabrica*." Suffice it to say we went miles out of the way, and I knew, but couldn't prove it. Mr. Katterfeldt, a young erect German, for a number of years explored for the shrub and shipped it in large quantities to Germany, where it was treated and used long before the rest of the world was aware of its value. When at last Mexico awoke and put an export duty of \$15 per ton upon it he built his present plant, which for some time he operated as a heat and chemical extraction factory. The cost of the process, however, has decided him to turn it into a purely mechanical factory. The plant is small to be sure, but it is the neatest and best built of them all, with the exception of the Continental. All of his product goes to Germany.

This is briefly the story of my trip. Of course, I saw the shrub growing, always on the calcareous foothills, and not in the open plain. I also saw the near relative of the guayule, the *maricola*, said by some to contain a small percentage of rubber, and by others none. If it does contain enough to pay to work I know where there are some million or more tons of it—and so do all the rest, for that matter. Then I hastened home—too quickly I fear to properly express my thanks to all of the guayule manufacturers who received me so cordially and made my task of getting facts so light.

#### ROCKEFELLER NOT IN RUBBER.

A LONDON despatch to the *New York Sun* says: "The Rev. Charles F. Aked, of Liverpool, who has under consideration a call to the pastorate of the Fifth Avenue Baptist Church, New York, said to-day that when he was in New York recently Mr. Rockefeller had assured him that neither he nor any member of his family had as much as a penny piece in the recent concession of Congo Free State territory made to an American rubber syndicate." The pertinence of this report lies in the fact that Dr. Aked in coming to America will be Mr. John D. Rockefeller's pastor.

THE entire product of guayule rubber of the Mexican Crude Rubber Co. (Detroit, Michigan) will be marketed by the New York Commercial Co. This company was organized last summer by a group of Detroit capitalists, with \$300,000 capital, and is producing the "Viesca Standard" brand of guayule. The general manager is Walter E. Parker, who sustains the same relation to the Coahuila Mining and Smelting Co., Limited, of Viesca,



PILES OF BALED GUAYULE RUBBER AT A MEXICAN FACTORY.

## The India-Rubber Trade in Great Britain.

By Our Regular Correspondent.

A SERIOUS fire occurred on February 13 at the rubber works of Messrs. Charles Macintosh & Co., Limited, at Manchester. The outbreak occurred at a few minutes past 7 o'clock in the evening, in the ball department, just when the work girls were leaving for the day, and before the flames were got

### FACTORY FIRE.

under subjection the two top stories of the principal mill were burned out and the roof had fallen in. A good deal of stock was destroyed, but the loss in this way was not so serious as it would have been a month later, the busy season having only just commenced. According to some newspaper reports I have seen that the cause of the fire was the ignition of naphtha vapors. This is only true in a sense, it being a small tin of naphtha on one of the work tables which got on fire, owing, I understand, to a defective gas jet. Nothing in the nature of an explosion occurred, such as might have resulted from an excess of naphtha vapors in the atmosphere of the room. A good deal of damage was done to the warehouse by water, the clerks having to be found temporary habitats elsewhere. I am informed by a member of the firm that the 150 work people affected by the fire have not been thrown out of employment, but have been put into other departments pending reconstruction.

In a paper read on February 4, before the London section of the Society of Chemical Industry, Dr. P. Schidrowitz and F.

### MOTOR TIRE ANALYSES.

Kaye gave detailed analyses of the treads and body rubbers of seven makes of British and foreign pneumatic motor tires. They prefaced their paper with the remark that, considering the importance the industry has now attained, it is remarkable that so little has been published with regard to the chemical composition of the tires. Those who know the rubber trade probably do not see anything remarkable in the fact that the individual makers have pursued their own investigations without stopping to read papers to enlighten their opponents. Nor have the manufacturers let the public into the secrets of their mixings, all that is usually said on this point being found in the categorical statement that the very best rubber is used. In the analyses given in the paper just referred to it is shown that the mineral matters in the tread vary from 16.4 to 56.8 per cent. and in the body from 2.12 to 6.8 per cent. The mineral matter found was only roughly specified, but from some of the remarks concerning it one would gather that the authors' knowledge of the rubber manufacture is not on a par with their knowledge of rubber analysis. I much doubt the general use of china clay in rubber work, and it is certainly surprising to be told that the iron in tire rubber is present either at ferric oxide or metallic filings. The authors do not concur in the statement sometimes made that the mineral matter is merely an adulterant, though they think that in some cases the quantity of mineral used may be excessive. The paper concludes with the opinion that in cases where tires fail in use a chemical examination of the rubber may be distinctly useful. This is a point where there is room for divergence of opinion. Analysis might show that the quality of the rubber in a tire was decidedly low, but as so much depends on the details of construction it is hardly safe to examine and report on the rubber apart from the canvas. Internal friction is known to have a good deal to do with the wear and tear of tires; indeed, a well known manufacturer expressed his opinion to me recently that quite 50 per cent. of the wear and tear of a tire lies in the details of its construction, quite apart from the intrinsic quality of the rubber. A tire with a cheap rubber mixing might, he said, prove much

superior in practice to one with a quite first class mixing if the general construction of the former were superior to that of the latter. Granting the truth of these statements, it is clear that analysts must use due caution in pronouncing on the quality of motor tires from the results of the analysis of the rubber portion.

LITTLE that was novel in the way of tires met my eye at this show, held at the St. James Hall, Manchester, February 22-

### MANCHESTER MOTOR SHOW.

March 2. Although the North British Rubber Co. were absent, the Dunlop Co., Charles Macintosh & Co., David Moseley & Sons, The Dook-Swain Tyre Co., and the Shrewsbury & Chalmers Co. had attractive displays of their tires. At the stand of Mr. G. W. Lowcock, M. I. E. E., was shown, Bailey's patent "Open-Door" spare wheel and tire carrier, an arrangement which does away with the inconveniences attaching to the ordinary fixed carrier. As usually carried on a motor car, the spare wheel or tire is held by clips to the side or footboard, and prevents access to some parts of the car. In the patent carrier a ring is hinged to a pillar or bracket fixed on the footboard, or to the frame of the car. It is fitted with a latch so that it can be instantly opened like an ordinary door. A novelty which attracted a good deal of attention was the Garner patent non-skid tread as fitted to the Macintosh motor tire. This is on an entirely new principle, the steel studded leather tread being fastened on to an overhanging tread which is part and parcel of the tire canvas. The overhanging lips consisting of five layers of canvas are strong enough to carry two renewals of the leather tread. Elaster, the "ideal substitute for air in inner tubes," was being effectively advertised at the show, and was being a good deal discussed. Although it does not seem to be proved whether the resiliency is or is not affected there is no doubt that with elaster in the tube puncture troubles need not be apprehended.

THE tragic end of Mr. Ralph Frankenberg in the wreck of the steamer *Berlin* at Hook of Holland deprives the Greengate rubber works of one of its prominent and capable managers. Both by his work people and those with whom he came into business contact the news of his decease has been received with sincere regrets. With his younger brother, Sydney, Ralph Frankenberg was admitted, in November, 1903, to the management of the business founded by their father in 1866, and the corporate style became I. Frankenberg & Sons, Limited. Mr. Frankenberg senior recently entered for a second term upon the mayoralty of Salford, after which a number of employees of the company and their wives were entertained by the mayor and mayoress. There was presented to Mr. Frankenberg at that time a portrait of himself, purchased with subscriptions from every one employed in the factory. Mr. Frankenberg responded in his own behalf and Mr. Ralph Frankenberg in behalf of his mother, thanking those present for their expressions of good wishes.

### THE RUBBER INDUSTRY IN EUROPE.

#### GROWTH OF A BELGIAN FACTORY.

THE business now conducted under the style Société O. Englebert Fils et Cie. was established in 1868 by the late Oscar Englebert-Couderé, at Liège, as a dealer in rubber goods. The business proving successful from the beginning, he began soon to experience the need of means for manufacturing goods for filling small orders for immediate delivery, and these he undertook to supply. In 1877 Monsieur Englebert engaged definitely in rubber manufacture, organizing a plant having a floor area of



2,000 square meters [=21,528 square feet]. This establishment has grown steadily until the area now exceeds 5,500 square meters. The business was organized into a joint stock company in 1892, under the management of O. Englebert fils. More than 500 workers are employed, and over 225 tons of rubber were consumed last year. Many interior and exterior views of the Liège factory and store are given in a handsome volume lately issued—"Guide Englebert Illustré." At the factory a wide range of rubber goods are made, and in the warehouse are carried the products of leading manufacturers abroad, but the Englebert specialty is pneumatic tires. By the way, the "Guide" referred to embraces a complete gazetteer of Belgium and Holland, for the benefit of motorists and cyclists on tour, with maps, lists of hotels, etc. There are branch Englebert factories at Givet (France) and Bussum (Holland), and branch selling depots in Brussels and Paris.

#### GREAT BRITAIN.

THE firm A. W. Leslie & Co., Limited, waste rubber merchants, 119 Stoke Newington road, London, are going through voluntary liquidation. Accounts are being settled by the official liquidators, Knox, Cropper & Co., 16 Finsbury circus, E. C., London. The above premises have been taken by A. W. Leslie, who will open the business of waste rubber merchant as soon as the matters in liquidation are settled.

The European Rubber Machinery Syndicate, Limited, has been registered at Manchester, with £50,000 capital, to acquire from Henry J. Doughty, of Providence, Rhode Island, certain patents relating to the manufacture of rubber boots and shoes, and machinery connected therewith.

The accounts of J. Mandleberg & Co., Limited, waterproof clothing manufacturers, at Manchester, for 1906, show a net profit of £25,900. The result of the year's trading shows a satisfactory improvement, having regard to the state of the waterproof trade, which, although exhibiting a general advance upon the previous year, has not yet returned to its normal level of demand. The prospects are considered good for the present year. Dividends: 7 per cent. on the cumulative preference shares and 12½ per cent. on the ordinary shares.

The Armstrong Trading Co., Limited, waste rubber merchants in London, have removed to larger premises at 16, Creechurch lane, Leadenhall street, E. C.

W. T. Henley's Telegraph Works Co., Limited (London), report a net profit for the business year 1906 of £63,959 [=£311,256.47]. The dividend is 4 per cent. on the preference and 15 per cent. on the ordinary shares. The manufacture of underground lead covered cables has been commenced at the new Gravesend works.

#### GERMANY.

THE number of employes of the Continental Caoutchouc und Guttapercha-Compagnie (Hannover) increased during 1906 to 5,673. The number was 2,741 in 1903, 3,294 in 1904, and 4,516 in 1905.

In further commemoration of the fifty-year "jubilee" of the Harburg Comb Co., in 1906, a report of which appeared at the time in THE INDIA RUBBER WORLD, the company have brought out a mammoth comb, for distribution to their friends in the trade for advertising purposes, which they call the "Jubilee." In America the distribution is made by the company's representatives, Messrs. Schrader & Ehlers, of New York.

The dividend of the Mitteldutsche Gummiwaren-Fabrik Louis Peter, A. G. (Frankfurt a/Main), is 8 per cent., against 7 per cent. last year.

The directors of the Hannoversche Gummi-Kamm Co., A.-G., recommended a dividend of 21 per cent. for the last business year, against 20 per cent. for the year preceding.

The dividend of the Continental Caoutchouc-und Guttapercha-Compagnie (Hannover) for the business year 1906 was the same as for the previous year—40 per cent.

THE Nederlandsch-Indische Caoutchouc-Compagnie has been organized by H. Diederichen, of Kiel, to plant rubber in the Dutch East Indies. The company has been registered in Holland, with 500,000 florins [=£201,000] capital.

The Gummiwerke Wundt (Offenbach a/Main), established in 1900 by Wilhelm Wundt, has been acquired by Carl Stöckicht, of the works at Frankfort, and will be operated under the name Offenbacher Gummiwerke Carl Stöckicht.

The German consumption of raw rubber in 1905 is stated at 13,541 tons, or one-fifth of the world's production. Ninety factories were at work, with 100,000,000 marks [=£23,800,000] capital, and employing 32,000 workers.

#### AUSTRIA.

THE death is reported of Josef Kunz, factory director of the long established firm of Josef Reithoffers Söhne (Vienna), with rubber works at Garsten and Pyrach. Herr Kunz entered the employment of the company in 1853. Four years ago, at the celebration of his "jubilee," he was decorated by the Emperor with a golden cross in reward of his valuable service to industry.

#### SWITZERLAND.

J. LONSTROFF, of Geneva, proprietor of the Fabrique Genevoise de Caoutchouc, advises THE INDIA RUBBER WORLD that the capacity of his factory at Carouge, devoted to the production of surgical goods, with seamless nipples as a specialty, has been materially enlarged.

#### RUSSIA.

THE Russian-French Rubber Works "Prowodnik," at Riga, are reported to have made a profit during 1905 of 1,014,000 rubles [=£522,210], on turnover of about 15,000,000 rubles. There were 4,500 workers employed. Riga has two other rubber plants, both smaller. The imports of crude rubber there for 1905 are stated at 126,000 poods [=4,536,000 pounds].

#### FRANCE.

THE officers for 1907 of the French Chambre Syndicate des Fabricants de Pneumatiques are M. Bloch, president; MM. Louis Chauvin and Hausmann, vice-presidents; M. Valéry Hermay, secretary; M. Rémy, assistant secretary; M. Paul Treuil, treasurer; M. G. Viard, archivist.

### WASTE RUBBER NOTES.

REFERRING to a communication in THE INDIA RUBBER WORLD [December 1, 1906—page 78] on "Russian Reclaimed Rubber," a correspondent asks why 7000 work people are required at the "Prowodnik" factory, at Riga, for their production of reclaimed rubber. It should be understood that the Riga factory turns out practically all lines of rubber goods, and is one of the largest plants in the world. Their rubber reclaiming business, though important, really is but a small proportion of the total production.

\* \* \*

In the list of grades of waste rubber printed in THE INDIA RUBBER WORLD, December 1, 1906 (page 89) by an inadvertence "P. O. gutta-percha strippings" were referred to as "poor old." Of course P. O. stands for Postoffice, the British postal department being the largest suppliers of gutta-percha strippings in the world.

THE completion of the National Tehuantepec railroad, across the isthmus of Tehuantepec, being the shortest route across Mexico, affords such improved facilities for transportation as cannot fail to prove of great benefit to the rubber and other planting interests in that region. The road is 190 miles in length, connecting the ports of Salina Cruz, on the Pacific, and Coatzacoalcas, on the Gulf of Mexico, at both of which ports capacious harbor terminals have been constructed by S. Pearson & Son.



## New Goods and Specialties in Rubber.

### ALLEN BATHING SUIT BAG.

THE sport of bathing is often marred by the annoyance attendant upon the care of one's clothes, for, nothing is more of a nuisance to carry than the paraphernalia of bathing after the bath. Those who would not consider hiring a



BATHING SUIT BAG.

suit are often deterred from the pleasure that a dip in old ocean would give them, simply because they do not wish to be burdened with wet bathing clothes. For these the Allen bathing suit bags have been designed. These bags are sufficiently large for the packing of a lady's entire bathing outfit—suit, sandals, stockings, cap, towel, etc. Yet they are not cumbersome or heavy, the largest size being only 4½ by 14 inches. The bags are referred to as being made of the best quality rubber lined material and are guaranteed waterproof. The seams are double stitched. When not in use the bags can be folded and carried in the pocket. At the close of the bathing season the bathing suit may be packed in the bag with camphor and protected from moths. [The Allen Auto Specialty Co., No. 1931 Broadway, New York.]

### G & J MOTOR CYCLE TIRES.

AMONG the most serviceable of the motor cycle tires the "G & J" has attained a place of prominence heretofore, but for 1907 several marked improvements have been made in them.



G. &amp; J. MOTOR CYCLE TIRES.

Among these improvements is the hollow rim. Heretofore the tire has been made for use with a single piece steel rim. This season a hollow steel rim of very attractive shape has made its appearance, with a two-piece center steel channel



MOTOR CYCLE TIRE WITH BAILEY TREAD.

in which supplementary edges seat. This makes the construction and operation of the motor cycle tire the same as the G & J bicycle tire. The new tire, it will be seen, is easier to place on and remove from the rim than the old, and when in place and inflated it is impossible to roll or blow it off, as it will be quite impossible to pinch the inner tube. The G & J Bailey tread motor cycle tire, shown in the second illustration, is especially good for slippery roads and is practically of the same weight and construction as the regular motor cycle tire. [G & J Tire Co., Indianapolis, Indiana.]

### RUBBER AND CANVAS BOX FOR SHOES.

A BOX for toes, which renders the toe flexible or elastic, has been patented recently. It is easily put in position in the shoe and will not break down or be injured by exposure to moisture when worn. This is for the cut-off-vamp type of shoe and is so devised that the box, tip, and vamp are secured together by a row of stitches, thus doing away with one stitching operation, and with the canvas forepiece usually employed, whereby the expense of making the shoe is reduced and its appearance is improved. This new box comprises what may be termed a body piece and a toe piece, the toe piece lying toward the interior of the shoe and the body piece outside the toe piece. The material for the body piece may be a sheet of rubber reinforced by

a sheet of thin fabric and the toe piece of canvas or duck. This will be smaller than the body piece, so that the body piece is relatively thin at the edges as compared with the thickness elsewhere. An inexpensive and satisfactory way of forming them is to superpose sheets of the reinforcing fabric, rubber, and canvas and unite them by passing through hot rolls, thus rendering the use of cement or paste unnecessary and avoiding the tendency to stiffen the structure which is due to the use of such materials. [Patented by James N. Moulton, Haverhill, Massachusetts, assignor to the Waterproof Welt and Filler Co.]

### GOODRICH ICE OR WATER CAPS.

THE beneficent agencies that make possible every sort of treatment that medical skill is capable of conceiving very largely find expression through the medium of rubber, directly or indirectly. The tendency of the times is toward natural remedies in so far as possible, and water enters largely into the prescribed treatment of the up-to-date physician. The ice or water cap is one of his chief reliances, and the success of his work depends to a degree, at least, upon the quality of his appurtenances. For comfort, durability, and efficacy, the best is always desirable. The cap here illustrated is seamless, made of fine Pará rubber, and provided with a screw cap. [The B. F. Goodrich Co., Akron, Ohio.]



GOODRICH ICE CAP.

### SPORTSMAN'S AIR CUSHION.

ONE of the necessities of the sportsman, if his is to be genuine sport, is comfort. Without it there can be little satisfaction from



SPORTSMAN'S AIR CUSHION.

a day in camp, shooting, canoeing, or whatever the sport may be. The Sportsman's cushion precludes all possibility of this, and moreover adds to the safety as well. For instance, it serves admirably as a life preserver that is always handy to throw overboard if any contingency arises. This in itself would make it almost a necessary part of the pleasure seeker's outfit, if any part of it is to be on the water. It can be used as a swimming collar to support the swimmer, as a seat in the canoe, on the porch or in camp—all in addition to the primary purpose, acting as a protection when carrying gun, oar, or canoe. The 6-inch extension over the shoulders has hollows for just these objects, and thus the neck is relieved of all pressure, which is most desirable in the case of a long tramp. Besides, the cushion is light and strong. [Metropolitan Air Goods Co., Reading, Massachusetts.]

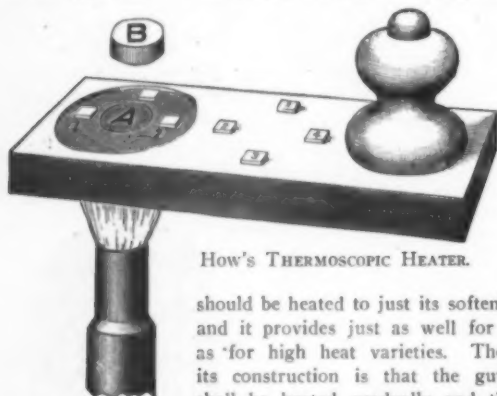
### METALLIC STAIR NOSINGS.

FOR ease and safety in ascending and descending stairs, in many instances, rubber stair treads are often most desirable. After having become used to them, one has almost to learn stair-climbing again if once deprived of these nerve and strength saving accessories. And not only to those who are on the stairs but to those who are nearby, the use of treads is a matter of consideration for the noise is so much lessened. But with rubber

treads alone the outfit is not complete. These are supplemented by the metallic nosings which cover the treads at the edge of the stairs. These come in all sizes and in various designs, including the plain, corrugated, half corrugated, diamond pattern, and so on, and are made in brass and zinc. [Painesville Metallic Binding Co., Painesville, Ohio.]

#### THERMOSCOPIC HEATER, FOR DENTISTS.

THE Thermoscopic heater which is an invention of Dr. How, is an appliance for the proper heating of gutta-percha, which



How's THERMOSCOPIC HEATER.

should be heated to just its softening point, and it provides just as well for low heat as for high heat varieties. The idea in its construction is that the gutta-percha shall be heated gradually and thoroughly without scorching, and that the operation shall have a correct gage as to the degree of heat used. It is made of steatite or soapstone, with a wooden handle. A metal button in the steatite, which melts at 212° F., shows the softening temperature of low heat gutta-percha. For high heat gutta-perchas this is poured out and substituted by a second button which melts at 230° F. This is one of the many devices that have gone to facilitate and make easy the practice of dentistry and many members of the profession have found this simple little heater almost indispensable in their work. [The S. S. White Dental Manufacturing Co., Philadelphia.]

#### SAMPLE CASE OF RUBBER GOODS.

It is always a great advantage to a prospective buyer in almost any line of goods to be able to procure in advance samples of the



MECHANICAL RUBBER GOODS SAMPLE CASE.

goods which he wishes to purchase. In this connection is illustrated a sample case for mechanical goods which is both serviceable and attractive. It is adapted especially for different kinds of

packings, belting and hose, which can be arranged in the case so as to be examined conveniently. At the same time they can be packed in little space, which is an added advantage. [The Mechanical Rubber Co. (Chicago Rubber Works), Chicago.]

#### RUBBER SUPPOSITORY MOLDS.

A PATENT has been applied for for rubber suppository molds, the general use of which, it is claimed, would be an advantage over the brass molds now in use. Suppositories are made of either cacao butter mass or glycerinated gelatine mass, and are made either by a cold pressure machine or by pouring the melted mass into split brass molds. The pressure machines are expensive and do not turn out uniform suppositories, the medicament never being evenly distributed throughout the mass, and they are seldom used except for special purposes. Both in drugstores and manufacturing the brass molds are generally employed for making suppositories, and on account of the machine work required in



SUPPOSITORY MOLDS.

finishing the brass mold they are very expensive, ranging anywhere from \$2.50 to \$100, according to size and capacity. An advantage in using rubber is that the rubber mold can be formed from iron patterns in the form of mats and these mats are then cut up so as to divide the mold into three parts, as shown in the illustration. This makes a great saving of expense in producing the article. Another advantage is in the actual working of the rubber mold itself, as it has always been difficult to remove suppositories from brass molds on account of the tendency to stick; in rubber molds the flexibility permits them to be easily ejected. [The Remington Manufacturing Co., Merchant's building, Philadelphia.]

#### "GLORIA" COIN MATS.

COIN mats are now conceded a necessity on nearly all counters over which change is made. The only question to be met is that of the choice of the best quality and fitness for the especial purpose to which each one is to be devoted. The better the grade of rubber, the better satisfaction is given, is the general consensus of opinion, hence those made of pure sponge rubber recommend themselves to the trade in a specific way. The mat known as the "Gloria" has this merit and also that of being attractive in appearance and convenient in size. Its measurements are 7 inches across, which dimensions meet the requirements of the ordinary uses to which coin mats are put. Another recommendation for their very general use lies in the fact that they are antiseptic, than which nothing could be of more importance when so much that is undesirable is transmitted by contact. [The Hanover Rubber Co., Hanover-Limmer, Germany. George Borgfeldt & Co., Nos. 48-50 West Fourth street, New York, sole agents for the United States and Canada.]

ACID TUBING.—The rubber drug known as "Atmoid" has been used with good results in the manufacture of acid tubing. For the tubing of the best quality it is recommended that 5 per cent of Atmoid be the only mineral filling used. For cheaper qualities a further addition of barytes may be used.

## Recent Patents Relating to Rubber.

## UNITED STATES OF AMERICA.

ISSUED FEBRUARY 5, 1907.

- N**O. 842,859. Mold for manufacturing rubber footwear. M. C. Clark, Providence, R. I.
- 843,046. Rubber stamp. S. E. Timmons, Lawton, Okla.
- 843,060. Rocking chair. [A rubber tire is secured lengthwise to the rocker, having protecting tubes fastened one in each end of the tire, and a wire embedded in the tire and extending through the tubes, the projecting ends of the wire being secured to the rocker.] J. C. Aronhalt, Kansas City, Mo.
- 843,115. Hose supporter. J. H. Stoltzfus, Laurel, Miss.
- 843,133. Storm front for vehicles. [A brow board detachably secured to the front of the vehicle top, a frame hinged at its top to the brow board, a window sash hinged at its top to said brow board, and adapted to close the aperture of the frame.] L. Cockerill, Richmond, Ind.
- 843,172. Vehicle wheel [having inner and outer sections, with an intermediate elastic cushion]. W. Quivey, East Orange, N. J.
- 843,233. Bellows fold couplings for vestibule cars. [Comprising a plurality of hollow sections constructed from a fabric woven in a continuous piece, said sections being joined together in the process of weaving, and a waterproof coating upon the exterior of said coupling.] E. L. Perry, Sr., and E. L. Perry, Jr., Paterson, N. J.
- 843,338. Non-leakable fountain pen. C. A. Hayward, Boston.
- 843,346. Golf balls. [A manufacturing process consisting of taking a solid and elastic core, winding tightly and evenly thereover vulcanized rubber windings, a portion of which is treated with elastic solution, and then heating the ball until the outer windings and the solution become soft, then placing the ball in a mold and subjecting it to pressure, allowing it to set.] A. B. and Jeannie MacNeil, Glasgow, Scotland.
- 843,478. Physical exerciser. Georg Müller, Berlin, assignor to Kolberger Anstalten für Exterikultur Wilhelm Anhalt G. m. b. H., Kolberg, Germany.
- 843,567. Process of extracting rubber. [Continuous process of extracting rubber from rubber bearing plants consists (1) in reducing the material in the presence of water by a cutting action to its almost individual fibers, at the same time comminuting the rubber so that the resulting pulp of rubber and fiber will sink or tend to sink in water; (2) in separating this pulp into a floating and sinking portion by any suitable means; (3) in collecting the floating portion containing the rubber, and in further cleansing this portion to obtain clean rubber.] G. B. Bradshaw, Brooklyn, N. Y.

## Trade Marks.

- 11,558. J. P. Sens, Brussels, Belgium. Picture of automobile approaching man who is carrying a tire and repair outfit. Used to mark solution for repairing pneumatic tires.
- 20,506. Black Cat Garter Co., Inc., Chicago. The word *Samson*. For hose supporters.
- 23,077. W. L. Barrell Co., New York. Picture of a tent in a downpour of rain. For waterproofed cotton piece goods.
- 24,409. George Frost Co., Boston. The word *Needram*. For hose supporters.
- 24,408. George Frost Co., Boston. The word *Kool-Knit*. For hose supporters.

ISSUED FEBRUARY 12, 1907.

- 843,627. Garter. G. H. Phelps, assignor to George Frost Co., both of Boston.
- 843,846. Vacuum creating device for jars. G. T. Reed, assignor to Continental Jar and Bottle Stopper Co., both of Baltimore, Md.
- 843,916. Insulating saddle staple. W. T. H. Taylor, W. J. Jenks, and R. N. Dyer, assignors to Insulating Staple Co., New York city.
- 843,963. Device whereby fire hose is coupled to hydrants. H. J. Page, assignor of one-third each to E. S. Randall and T. P. Howard, all of Montreal, Canada.
- 844,007. Comb. [Having a back composed of three separately formed and detachable sections.] A. Ehrlich, Springfield, Mass.
- 844,061. Fountain pen retainer. L. D. Van Valkenburg, Holyoke, Mass.
- 844,077. Process for the production of aqueous caoutchouc solutions and the regeneration of rubber waste. [Consists in dissolving caoutchouc, and treating the solution thus obtained with a strong alkaline, aqueous liquid, adding water to the resulting product, and then subjecting the mixture to the action of steam until the solvent is distilled off from the solution, separating the resulting alkaline liquid from the resulting viscous caoutchouc mass and dissolving this mass by stirring with water.] P. Alexander, Charlottenburg, Germany.
- 844,139. Insulating material and method of manufacturing the same. [Consists in impregnating material having printers' ink therein with

a vulcanizable material that includes rubber and liquid glass, and vulcanizing the same.] G. Kelly, Hinsdale, Ill.

844,140. Insulating material and method of manufacturing the same. Same.

844,201. Tire. [A central body composed of a vulcanized resilient rubber compound of low wear resisting qualities, and an outer removable sheath composed of fabric and a rubber compound of high wear resisting qualities, and means for detachably securing said sheath to wheel rim, the core having longitudinal grooves or air spaces on opposite sides and an internal air space between the first mentioned air spaces, these air spaces being in radial alignment with the wheel rim.] H. L. Slager, Springfield, assignor of one-half to Charles Swigart, Cincinnati, Ohio.

844,242. Bust supporter. Johannes Bree, Charlottenburg, Germany.

844,286. Garter. J. F. O'Brien, Buffalo, N. Y.

Trade Marks.

20,505. Black Cat Garter Co., Inc., Chicago. The word *Hercules*. For hose supporters.

23,683. Louis Dusenbury, New York city. The word *Ideal*. For lap robes for automobiles.

23,808. Revere Rubber Co., Boston. The word *Samson*. For hose and packing.

24,379. George S. Colton, Easthampton, Mass. The words *Extra Fine Quality—Giant—Elastic Web*, in a fanciful frame-like setting. For elastic webbing.

24,501. Revere Rubber Co., Boston. Picture of a man subduing a lion. For hose and packings.

ISSUED FEBRUARY 19, 1907.

844,335. Syringe. J. H. Dodson, Chicago.

844,403. Wheel. [Comprises a felly, spokes, and a ring connected together, a hub of lesser diameter than the ring, a pneumatic ring interposed between the ring and the hub and springs at opposite sides of the wheel.] D. Robinson, Brookline, Mass.

844,413. Comb. [In connection with a comb means for marking a part.] J. J. Schulz, Chicago.

844,575. Fountain pen. J. S. Barnes, Rockford, Ill.

844,576. Fountain pen. Same.

844,646. Fountain pen. H. W. Bahr, Helsingfors, Russia.

844,728. Rubber-tired wheel. [Solid rubber tire.] J. P. Johnston, Evanston, Ill.

844,820. Method of forming pneumatic tires or tire casings. [Consists in forming and partly vulcanizing the body, applying an adhesive element to the outer surface, then applying an unvulcanized tread portion so formed as to be vulcanized in the time required to complete the vulcanization of the body portion and finally vulcanizing the whole structure.] A. H. Marks, Akron, Ohio.

844,821. Solid rubber tire. Same.

844,822. Method of forming solid rubber tires. [A tire having a plurality of layers of metal fabric or the like embedded therein; the method consisting in forming two parts of rubber compound having one or more layers of metal fabric embedded in each and then uniting said parts to form an integral whole.] Same.

844,882. Heel for boots and shoes. J. F. Lober, Pittsburgh, Pa.

Trade Mark.

15,964. F. H. Mooney, Chicago. Picture of a crescent moon with the man's face in profile, over his ear a fountain pen and in front of his face the letter E. For fountain pens.

ISSUED FEBRUARY 26, 1907.

845,135. Pneumatic hub for wheels. W. S. H. Smith, Croydon, England.

845,249. Syringe nozzle. N. T. Morris, Marietta, Ohio.

845,303. Syringe. T. J. Kernan, Akron, Ohio.

845,321. Garment supporter or garter. H. M. Stridham, New York city.

845,327. Pneumatic cushioning wheel support. G. W. Bell, Liverpool, England.

845,349. Hose supporter. H. C. Giles, Rutherford, N. J., and W. W. White, New York city.

845,355. Curtain support. W. Hubert, assignor of one-half to J. Weimer, both of Chicago.

845,436. Storm shield for vehicles. J. J. Russell, Jr., Deepwater, Mo.

845,467. Pocket clip for fountain pens. H. B. Levy, New York city.

Reissue.

12,613. Adjustable storm front for vehicles. G. W. Scott, Troy, Ohio. (Original No. 832,751—October 9, 1906.)

Trade Mark.

24,802. Alfred Hale Rubber Co., Boston. The words *Bay State*. For marking rubber cement.

[NOTE.—Printed copies of specifications of United States patents may be obtained from THE INDIA RUBBER WORLD office at 10 cents each, postpaid.]



## GREAT BRITAIN AND IRELAND.

## PATENT SPECIFICATIONS PUBLISHED.

The number given is that assigned to the Patent at the filing of the Application, which in the case of those listed below was in 1905.

\*Denotes Patents for American Inventions.

[ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, JANUARY 23, 1907.]

- 19,854 (1905). Sole protector. A. E. Wells, Dorchester.  
 19,864 (1905). Device for inflating pneumatic tires. A. G. Lavertine and J. E. McNellan, both of Johannesburg, Transvaal.  
 19,887 (1905). Bottle stopper. F. Bagar, Vienna.  
 19,973 (1905). Pneumatic tire attachment. [The pairs of tires are connected by flexible tubes passing through the axle, the object being to ensure that the tires collapse simultaneously in case of an accident to either.] F. A. U. Dacle, Gand, Belgium.

20,008 (1905). Tire shield [to be fitted between the air tube and outer cover, or built into the canvas layers of the cover; consists of cotton, with sufficient of the oil removed, dressed with shellac and a solution of gum mastic]. E. W. Colman and A. J. L. Glidden, London.

20,032 (1905). Sole and heel protector. H. J. Tonks, Birmingham.  
 20,131 (1905). Tire cover [provided with a band of leather and metal plates, to prevent skidding or puncture]. C. Taylor, Eccles, and J. F. Riding, Pendleton, Lancashire.

20,161 (1905). Pneumatic tire [with metal plates to prevent punctures]. T. Hayward, Merton, Surrey.

[ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, JANUARY 30, 1907.]

\*20,252 (1905). Stocking suspenders [supplied with abdominal or hip pads]. S. Mayper, New York.

20,307 (1905). Pneumatic tire. M. Brun, Lyons, France.

20,308 (1905). Pneumatic tire. [Covers and tread bands are made from leather which has not been unhaird. The band of hairy leather is secured by rivets to the cover.] E. Fortier-Beaulieu and A. Fortier-Beaulieu, Roanne, France.

20,407 (1905). Revolvable heel pad. G. Morton, Blackley, Manchester.

20,472 (1905). Elastic tire [secured in position by the lateral movement of screw threaded rings engaging with circumferential threads cut on the periphery of the felloe or rim]. C. K. Welch, Coventry.

20,484 (1905). Spring wheel with elastic tire. J. C. Bunge, Amsterdam, Holland.

20,597 (1905). Pneumatic tire, with removable tread band. H. W. Cave-Brown-Cave, London.

20,606 (1905). India-rubber. [Means for extracting the more valuable part from crude rubber.] M. Wilderman, Ealing, Middlesex.

20,626 (1905). Flexible tube for connecting an inflator to a pneumatic tire. A. Smith, Parade, Birmingham.

20,642 (1905). Pneumatic tire. R. and C. H. Wallwork, both of Manchester.

[ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, FEBRUARY 6, 1907.]

20,668 (1905). Spanner for stretching or opening punctures in pneumatic tires. H. S. Hallance, Weston-super-Mare.

20,700 (1905). Pneumatic tire [with fabric and sheet cork combined in alternate layers by means of caoutchouc]. P. Lonsade-Desprez, Lyons, France.

20,748 (1905). Pneumatic tire [embodying a coarse linen fabric known as "drabbets"]. W. Whitmore and G. Allan, both in Kenton, Stowmarket, Suffolk.

20,793 (1905). Spring wheels with elastic tire. A. L. H. Ripert and P. Schmitt, Asincres, France.

20,840 (1905). Mandrel for joining the ends of pneumatic tire tubes. C. Lee and County Chemical Co., both in Birmingham.

20,854 (1905). Pneumatic tire. [With puncture preventing strip of French horn enclosed in canvas.] A. E. Matthews, Brixton.

20,885 (1905). Suction carpet cleaner. A. Hein, Berlin, Germany.

20,905. Golf ball [having a core formed of a spherical rubber bag, filled with incompressible fluid]. F. H. Mingay, Berfield, Renfrewshire.

21,000 (1905). Spring wheel, with pneumatic cushion and solid rubber rim tire. G. P. Appleyard, Halifax, Yorkshire.

\*21,052 (1905). Swimming attachment, for the foot. E. J. McKittrick, Walla Walla, Washington.

21,103 (1905). Cushion heel for boots. J. H. W. Evans, Rangoon, Burma.

[ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, FEBRUARY 13, 1907.]

21,156 (1905). Hoof pad. P. Clifford and D. J. Corbett, both of Buffalo, New York.

21,163 (1905). Pneumatic tire. [To prevent slipping or punctures, a leather band is fastened inside the outer cover by eyelets; steel or like studs are passed through the eyelets and their shanks are riveted down over metal washers.] F. W. Pratt, London.

21,169 (1905). Tire for heavy vehicles [comprising metal or other shoes, fitting over rubber cushions which are spaced around the felloe]. A. T. Collier, St. Albans, and Reilloc Tyre Co., London.

21,282 (1905). Pneumatic tires [with puncture preventing slip]. F. J. Moran, Birkenhead.

21,304 (1905). Vacuum cleaning apparatus [for carpets and the like].

W. Griffith, Birmingham.

21,326 (1905). Hose coupling. D. Hurst and Brierley, Ltd., Rochdale.

\*21,362 (1905). Hose coupling. E. Schwaneberger and J. Thomson, Pittsburgh, Pennsylvania.

21,417 (1905). Means of securing detachable soles and heels. A. Seitz, Rastatt in Baden, Germany.

\*21,540 (1905). Solid tire. [Means of securing to the felloe by hollow split wedge rings drawn together by traverse bolts.] Thomas Midgley, Hartford, Connecticut.

21,595 (1905). Golf ball [with core formed of spiral springs.] R. L. and E. M. Urquhart, both of Edinburgh.

## THE FRENCH REPUBLIC.

## PATENTS ISSUED (WITH DATES OF APPLICATION.)

367,925 (July 9, 1906). Coltman. Spring wheel.

367,951 (July 10). Swinehart Clincher Tire and Rubber Co. Pneumatic tire.

368,003 (July 12). Subra. Elastic tire.

368,079 (July 16). A. Montandon. Spring wheel.

368,102 (July 17). Wensch. Billiard cue rubbers.

368,165 (July 18). J. S. Barney. Pneumatic tire.

368,222 (July 19). A. Deschamps. Tire.

368,226 (July 12). J. Carrier. Anti-skid tire.

368,144 (June 2). W. A. Koneman. Reclaiming rubber.

368,273 (May 2). H. Dauce. Rubber bead on leather tire.

368,354 (July 27). H. Blauco. Spring wheel.

368,391 (July 26). G. Granger. Removable rim.

368,459 (July 27). E. L. Dozen. Pneumatic tire.

368,466 (July 28). C. Gabet. Removable rim.

368,525 (July 30). Société Michelin et Cie. Tire pressure gage.

368,571 (Aug. 1). C. L. Charley. Removable rim.

[NOTE.—Printed copies of specifications of French patents may be obtained from R. Robert, Ingenieur-Council, 16 avenue de Villiers, Paris, at 50 cents each, postpaid.]

## BALATA ON THE FREE LIST AGAIN.

A DECISION in the United States circuit court for the southern district of New York (published in *Treasury Decisions*, March 7, 1907,) reverses the decision of the board of United States general appraisers, affirming the assessment of duty by the collector of customs at the port of New York on crude balata at 10 per cent. *ad valorem* as "a nonenumerated unmanufactured article," under section 6 of the Tariff act of 1897.

The importers (Earle Brothers) claimed that balata is entitled to free entry as "india-rubber, crude," under paragraph 579 of the Tariff act. It was not denied that, botanically, the tree yielding balata differs from that to the gum of which the term "india-rubber" was first applied. But under the rule that, in laws relating to the revenues, words are to be taken in their commonly received and popular sense, or according to their commercial designation, the importers contended that there was no one kind of gum identified by the words of the Tariff act, "india-rubber, crude." The word "india-rubber" is used to designate nearly a hundred varieties of "inspissated vegetable gums" capable of use in making "india-rubber" goods.

In rendering the latest decision, Judge Hough said: "In my opinion, these contentions of the importers have been abundantly sustained by the testimony introduced in this court. I think it must be assumed that the framers of the Tariff act knew that there was a great variety of gums generically and commercially described as 'india-rubber,' and within that category balata is fairly included." [See THE INDIA RUBBER WORLD, March 1, 1907, page 180.]

THE imports of balata into the United States are small, as compared with some other countries, but undoubtedly the following treasury department figures understate the amount, through a failure in some cases to classify balata separately:

Years.	Pounds.	Value.	Av. Value.
1900-01.....	7,635	\$1,987	26 cents.
1901-02.....	15,762	7,441	47.2 cents.
1902-03.....	8,467	3,387	40.1 cents.
1903-04.....	113,460	45,548	40.1 cents.
1904-05.....	211,612	79,263	37.5 cents.



# The Rubber Manufacturers' Mutual Insurance Company

## AND ITS ACTIVE HEAD.

EARLY in 1884 the late Benjamin F. Taft and his son, Benjamin Taft, at that time prominent in the Cotton and Woolen Manufacturers' Mutual Insurance Co., met in Boston certain leading rubber manufacturers to consider a plan for a mutual insurance company that should consider fire risks in rubber factories. At that time, be it noted, rubber factories were considered so hazardous that fire insurance companies refused to rate them at all, and if they insured them it was a matter of special negotiation and rating.

In November, 1884, the Rubber Manufacturers' Mutual Insurance Co. was chartered under the laws of Massachusetts, the following rubber manufacturers being the organizers: George H. Hood, Isaac P. T. Edmands, Elisha S. Converse, Eugene H. Clapp, Robert D. Evans, Wheeler Cable, Freeman Wight (temporary incorporator and succeeded very soon by Henry L. Hotchkiss), Henry C. Morse, and James Bennett Forsyth, with the very important addition to the board of two men not rubber manufacturers, Benjamin Franklin Taft and Benjamin Taft. Very soon afterward the late George F. Hodgman, of New York, was added to the board. The company started out with the very cheering prediction from the Massachusetts insurance commissioner that it would live about six months.

The first policy which the company wrote was dated January 15, 1885, and issued to the Boston Rubber Shoe Co., the rate being \$3 per hundred. It is interesting to note also that about the same time the Woonsocket Rubber Co. took out a policy, the rate being \$4 per hundred, and the Aetna Rubber Mills one at \$4.50 per hundred. As a matter of contrast it should be stated here that the present rate is 15 cents per hundred, that the company is still alive, as will be seen by the annual report printed below, and that it has saved insurers thousands and thousands of dollars. Beyond this, by bringing together men who were practical rubber manufacturers, who not only knew the risks in their business, but could provide adequate remedies for them and in nearly every instance remove them in building construction or in adapting processes, the whole complexion of rubber risks has entirely changed, so that to-day the old line companies are bidding for and accepting rubber risks at rates that a few years ago would have seemed impossible.

The charter of the Rubber Manufacturers' Mutual Insurance Co. specifies broadly insurance on manufacturing property and buildings and stock, especially rubber manufacturing property, and quite lately this has been broadened so that property other than manufacturing or in process of manufacture, that is property in storehouses, may be insured.

The directors of the Rubber Manufacturers' Mutual Insurance Co., who meet once a month, have always been leading rubber manufacturers, and these meetings have been most potent in bringing together the leading rubber interests on a friendly basis, so that an incidental effect of this association has been an exceedingly friendly and respectful appreciation by each other of men who in business were naturally keen competitors.

It is impossible to mention the Rubber Manufacturers' Mutual Insurance Co. without calling attention to the Cotton and Woolen

Manufacturers' Mutual Insurance Co., organized in 1875, and the Industrial Mutual Insurance Co., organized in 1890. All the three companies are run from the same offices at No. 31 Milk street, Boston, and are very closely identified with each other as far as policy, management and officers go. The present management of the Rubber Manufacturers' Mutual Insurance Co. is as follows:

President—ARTHUR W. CLAPP.

Vice President—BENJAMIN TAFT.

Secretary and Treasurer—BENJAMIN TAFT.

Assistant Secretary and Assistant Treasurer—F. W. MOSES.

Assistant Secretary—W. B. BOOTH.

Directors—George H. Hood, Boston; Benjamin Taft, Ayer, Mass.; Marcus Beebe, Malden, Mass.; Robert Batcheller, Boston; E. B. Page, Winchester, Mass.; A. W. Clapp, Weston, Mass.; C. C. Converse, Malden, Mass.; E. H. Clapp, Boston; M. V. B. Jefferson, Worcester, Mass.; F. W. Pitcher, Easthampton, Mass.; W. B. Plunkett, Adams, Mass.; C. E. Stevens, Ware, Mass.; E. S. Williams, Malden, Mass.; George B. Hodgman, New York; Arthur H. Lowe, Fitchburg, Mass.

The presence of some men who are not rubber manufacturers on this board is offset by the presence of rubber manufacturers on the boards of the other two companies. For example, on the board of the Cotton and Woolen Manufacturers' Mutual Insurance Co. appear the names of H. E. Converse, F. W. Pitcher, Arthur W. Clapp and E. S. Williams, and on the board of the Industrial company are C. C. Converse, Lester Leland, Arthur W. Clapp, F. W. Pitcher and E. H. Clapp.

At the last annual meeting of the Rubber Manufacturers' Mutual Insurance Co. the following financial report was made:

Amount at risk.....\$51,755,524.00

### ASSETS.

Bonds at book value.....	\$352,000.00
Cash in bank and office.....	26,287.59
Premiums in process of collection.....	11,313.77
Accrued interest.....	5,672.07

Gross cash.....\$395,273.43

### LIABILITIES.

Unadjusted losses.....	\$22,016.08
*Unearned premiums on outstanding risks.....	231,917.05
	253,933.13

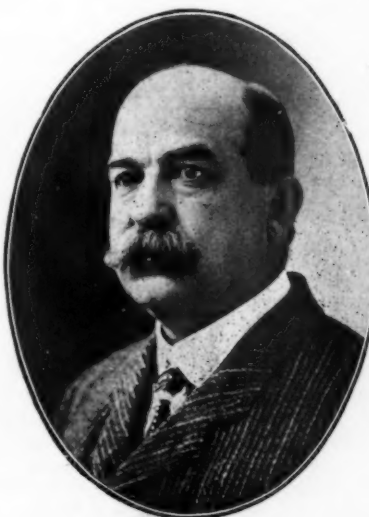
Net cash.....	\$141,340.30
Assessment liability.....	2,319,170.55

Total amount applicable to payment of losses.....\$2,460,510.85  
Average dividend paid in 1906, 85 per cent.

\* Unearned premiums only because due after notice of cancellation of policies, and are even then deferred claims until all losses shall have been paid. Add Unearned Premiums to Total Assets and you have amount applicable to paying losses.

As is indicated above the practical head of the Rubber Manufacturers' Mutual Insurance Co. at its inception was the late Benjamin Franklin Taft, whose personality and work THE INDIA RUBBER WORLD always appreciated. At the time of his decease in 1901, his son, Benjamin Taft, who has been in the company from its beginning, became its secretary and active head.

Benjamin Taft was born April 29, 1852, in Northbridge, Massachusetts, where his family had lived for many generations. He was educated in the public schools in Ayer and Groton, graduated from Lawrence Academy, Groton, and later at Bryant & Stratton's Commercial College in Boston. His first beginnings as a business man were as a printer at Groton Junction. Later he went into the manufacture of woodenware with his father at West Acton, Massachusetts. Then he took a position with the Boston and Maine railroad, and in 1877, at the earnest request of his father, came into the Cotton and Woolen Manufacturers' Mutual Insurance Co. as assistant secretary. Mr. Taft is a 32°



BENJAMIN TAFT.

Mason, and indeed, a prominent official in the Scottish Rite bodies. He is also an Odd Fellow, these two bodies summing up about the only relaxation he takes. Perhaps an exception should be taken to this, however, by the statement that insurance is to him, not a daily grind, but a relaxation. No one can come into contact with him without appreciating how he not only knows, but loves every detail of insurance, and what an enjoyable profession he makes of it.

The rubber trade owe a great deal to the Rubber Manufacturers' Mutual Insurance Co. in the work that they have done in reducing risks in rubber manufacture and in minimizing premiums, and in saying that one really says what the rubber trade owes to the Tafts—father and son.

#### AMERICANS START FOR THE CONGO.

THE first expedition to be sent to Africa for the development of the Congo concession granted recently to a group of American capitalists, left New York on March 5 on the steamer *Kaiser Wilhelm der Grosse*. The party numbered 18, including mining and other experts, and was to be joined at Cherbourg by representatives of the Belgian group who are financially interested. At the head of the expedition was Dr. Samuel Phillips Verner, general manager of the American Congo Co. (No. 35 Nassau street, New York), who has spent many years in African exploration. The headquarters of the American party will be, at least for some months, at Leopoldville, on Stanley Pool, and the party expect to be absent 18 months. Three of the party are members of the United States Geological Survey, who have been granted leave of absence. As reported already in *THE INDIA RUBBER WORLD* (January 1, 1907, page 106) the American *concessionaires* are to be concerned largely in mining as well as in rubber, but it is probable that the rubber interest will be the first to be developed.

It is Mr. Verner's idea that the first steps to be taken in the Congo should be in the direction of gaining the confidence of the natives and providing for the comfort of those to be employed. He regards the native population as too small to develop the Congo resources fully, and thinks that good opportunities will exist there for Americans, both white and colored.

According to the *Mouvement Geographique* (Brussels) the council of administration of the American Congo Co. is composed of Nelson W. Aldrich, Bernard M. Baruch, A. Chester Beatty, P. F. E. Christaens, Henri De Keyser, Daniel Guggenheim, Solomon R. Guggenheim, L. Hanolet, E. Hinck, E. Huysmans, A. Rouffart and Thomas F. Ryan. [The names of the Belgian group are printed in italics.] Mr. Aldrich is a United States senator for Rhode Island; the Messrs. Guggenheim are members of M. Guggenheim's Sons, smelters, and of the Guggenheim Exploration Co. Simon Guggenheim, a brother of two members of the council, has been elected recently a United States senator for Colorado. Mr. Baruch is a New York broker with interests in common with the Guggenheims, and Mr. Beatty is a mining expert in their employ. Mr. Ryan is a banker.

#### A PIONEER CONGO RUBBER TRADE.

THE American Congo Co. are not the first American enterprise in the Congo rubber trade. General Henry Shelton Sanford, J. U. D., LL. D., an American supporter of King Leopold's African project from its inception, may be regarded as the pioneer in the direct trade with the natives of the Congo interior in ivory and rubber. His company, formed for this purpose, the Sanford Exploring Expedition, was merged in 1888 with the *Société Anonyme Belge pour le Commerce du Haut Congo*, formed in that year and still existing. General Sanford was born in Connecticut in 1823 and entered the United States diplomatic service in 1849, serving as minister to Belgium in 1861-69. He was one of the founders, in 1877, of the International African Association, planned by King Leopold. The flag of the association was un-

recognized by any power until 1884, when General Sanford secured its recognition by the United States government in a declaration on the strength of which the association assumed the dignity of a state and assumed the name "Etat Independant du Congo." The document referred to was signed, on behalf of the association, by General Sanford. At the Berlin conference of 1884-85, of the powers which by that time had recognized the Congo Free State, General Sanford was one of the two delegates from the United States. Before his death Sanford founded the town of Sanford, Florida.

#### THE SENATE WANTS TO KNOW.

IN the United States senate, on March 1, a resolution was offered requesting the President to state whether the government had information as to the granting of a concession by the Congo Free State to citizens of the United States for gathering rubber in that state. The resolution asks for the names of such citizens, the boundaries of the concession, and the powers given to the *concessionaires*—particularly "what powers are given by such concession to such company or syndicate to exercise government or control over the native people of such area, either separately or in coöperation with the government exercised by King Leopold over the Free State of the Congo." Also, whether such company "has submitted its concession to the government of the United States for approval or disapproval, and whether the same has been approved." The senate adjourned until December without action on the resolution.

#### A RUBBER SUBSTITUTE FROM IOWA.

WRITING from Fort Dodge, Iowa, to *THE INDIA RUBBER WORLD*, Miss Mabelle Newland says: "I have, after several years of study and work, perfected a substitute for rubber." From newspapers published in the same locality it is learned that the lady mentioned has been granted a patent in the United States and several other countries "on a chemical composition which cannot be told from genuine Pará rubber." Another report is that this composition "will do anything that can be accomplished with the best Pará rubber, and can be manufactured at one-fourth the cost of genuine rubber." Miss Newland is mentioned as being employed in a telephone exchange.

#### "ZAKINGUMMI."

ZAKINGUMMI is the name given to a new substitute for rubber invented by Zacharias Olsson, a chemist of Upsala, Sweden. It is claimed to contain no rubber, and to be produced at a cost of about one-third the cost of rubber. It has been used in making a number of articles, including rubber stamps and gas tubing; also for a tire filler, to be used instead of air tubes. It is stated that a company has been formed to erect a factory for making the new material.

#### BRAZILIAN RUBBER TRUST.

THE reports presented at the fifth annual meeting of The Brazilian Rubber Trust, Limited (London, December 7), showed a continued absence of profits. It was pointed out, however, by the chairman, Mr. Ashmore Russau, that the company's property had grown more valuable during the five years, ending April 30 next, that it had been under lease to a Brazilian group. The company had been obliged to accept a very low rental, at the beginning. Upon the expiration of the lease they would be certain to be able to do much better. The company had decided upon a reorganization, with increased capital, and it was believed that the shareholders would begin to get a return upon their investment. Mr. Russau was reelected chairman. The company was formed to succeed the unsuccessful Rubber Estates of Pará, Limited, organized in 1898, with £350,000 capital, to purchase the rubber property of the Visconde de Sao Domingos, on the island of Marajo, near Pará.

## RUBBER PLANTING INTERESTS.

## PRODUCTION IN THE FAR EAST.

THE exports of plantation rubber from Ceylon and the Malay States during 1906, according to *The Times of Ceylon*, totaled 1,190,879 pounds, against 397,347 pounds in 1905. The share of Ceylon in this total is somewhat less than had been supposed, seeing that all the exports from Ceylon were credited to that island until a corrected statement came out at the end of the year. It now appears that the rubber of Ceylon production exported during the year was 327,024 pounds, leaving 863,855 pounds for the production of the Malay peninsula. The approximate value to the planters of the Ceylon produce is estimated by the *Times* at about 1,250,000 rupees, which works out at about \$405,543 (gold), or \$1.24 per pound, including all grades.

The 1906 yield of rubber on some of the Federated Malay States plantations is reported as follows:

	Pounds.
Highlands and Lowlands Pará Rubber Co.....	130,365
The Anglo-Malay Rubber Co. (about).....	100,000
Pataling Rubber Estates Syndicate.....	43,380
Consolidated Malay Rubber Estates.....	32,500
Vallambrosa Rubber Co. (nine months).....	99,258

The yield of the Kepitigalla estate, in Ceylon, was 31,000 pounds.

## THE NEW "BLOCK" RUBBER.

TO THE EDITOR OF THE INDIA RUBBER WORLD: At the Ceylon Rubber Exhibition it was suggested by Dr. Willis that it might be advisable, instead of, as at present, drying the plantation rubber till it only contains about  $\frac{1}{2}$  per cent. of moisture, to block it in the wet freshly coagulated condition. Experiments with this object were at once carried out by Mr. Kelway Bamber, the Ceylon government chemist. He prepared the rubber with creosote (to prevent decay and mold) and blocked it at once, getting blocks containing about 9 per cent. of water. These sold in London for 5s. 6d. per pound, against 5s. 7d. to 5s. 9d. for the ordinary dry Ceylon rubber, thus really getting a much better price. A circular (Circular and Agricultural Journal of the Royal Botanic Gardens, Peradeniya—Vol. IV, No. 1) has been lately issued dealing with this matter, and it would seem likely that the old way of making dry biscuits or sheets will soon be extinct.

JOHN C. WILLIS.

Director Royal Botanic Gardens.

Peradeniya, Ceylon, 18 January, 1907.

## VAN DEN KERCKHOVE'S "FUMERO."



FUMERO V. D. K.

THE illustration relates to the "Fumero," for coagulating rubber by a smoking process, patented by Gustave Van den Kerckhove, of Brussels, and mentioned in THE INDIA RUBBER WORLD March 1, 1907 (page 200). The device proper is really only a small furnace, the latex being coagulated on a paddle in the hands of the operator, revolved over the furnace, in the escaping smoke. The screw half way up the side of the fire chamber is for regulating the smoke. For fuel, palm nuts are preferable, but if these are lacking, the bark of any tree may be used, but not dry

wood. Dried leaves may also be used. This device is intended for use in the East.

## RUBBER TAPPING AT "LA ZACUALPA."

THE management of La Zacualpa Rubber Plantation Co. having decided to discard the machete for tapping *Castilloa* trees on their plantation in Chiapas (Mexico), their manager, Mr. C. A. Leshner, set apart devising a more suitable tapping tool, from which most satisfactory results are reported. The tool consists of a loop of steel in a handle some 18 inches long and having inside of it a long steel finger which is forced forward or back by a thumb screw to regulate the depth of the cut. They are used in various sizes, depending upon the age of the tree, and therefore the thickness of the bark to be cut through. The tool



MANAGER C. A. LESHNER AND HIS RUBBER TAPPING TOOL.

is very sharp on the entire lower edge of the loop. This allows a sharp, clean, quick cut to be made. At present one man can tap from 60 to 70 trees in a day. The latex is caught in cups or pans; it is strained twice, to rid it of foreign matter; washed four times, allowed to coagulate, and run between powerful rollers to express the water. By the washing process it is believed that the greater part of the resins are removed from the rubber, and while the shrinkage is greater, the resulting product is superior and is expected to bring a better price.

## BRIEF MENTION.

MR. H. K. RUTHERFORD, of London, prominently interested in tea planting and a director in a number of rubber planting companies, was a recent visitor to Ceylon and the Malay States.



## THE RISE IN PRICE OF SEA ISLAND COTTON.

THE price of Sea Island cotton fabrics has been a matter of unusual concern this season to the manufacturers of pneumatic tires. Raw Sea Island cotton has never before reached such figures. The table herewith, compiled for THE INDIA RUBBER WORLD by Messrs. John Malloch & Co., of Savannah, Georgia—where is the principal market for Sea Island—gives the range of prices (in cents per pound) at Savannah during the "active" months of each year. New York prices usually are 1 cent per pound higher. The basis for quotations is the "fine" grade; there are lower priced grades, while "extra fine" may go 5 cents or more above the base price.

The Sea Island cotton crop of 1906-07, not yet all marketed, is reported much smaller than for some years past. Messrs. Malloch & Co. estimate it at slightly less than 60,000 bales. The crop for six preceding years was: 88,725 bales in 1900-01; 84,522 bales in 1901-02; 105,955 bales in 1902-03; 76,414 bales in 1903-04; 102,191 bales in 1904-05, and 123,789 bales in 1905-06, the latter being the largest on record.

The amount of Sea Island cotton taken by American mills in the season of 1905-06 was 90,909 bales, the remainder being exported. If the total crop this year should amount only to 60,000 bales, it will be seen that manufacturers must look to other sources for long staple cotton. As is well known, there are exceptionally good lots of ordinary cotton which bring fancy prices. Recently a Fall River manufacturer was reported as saying that the cotton used by the mills making the finest cloth there cost in the neighborhood of 23 cents—nearly double the New York quotation for middling. Egyptian cotton, on account of its long staple, is imported to an important extent, the amount taken by the United States in 1905-06 reaching 105,697 bales. The relation of prices was indicated by a recent New York quotation supplied to THE INDIA RUBBER WORLD: 38 cents for Sea Island and 25 cents for Egyptian.

The Sea Island cotton growers have been organizing of late years, with the idea of limiting production, in order to maintain prices at what they consider a figure that will yield a profit. How far the smaller crop of 1906 is due to such action it is not possible as yet to say. At the annual meeting of the Sea Island Cotton Association, at Valdosta, Georgia, in January, a resolution was adopted calling upon planters to reduce their acreage this year below that of last year.

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FROM Messrs. W. W. Gordon & Co., cotton factors at Savannah, have been received the following quotations for Sea Island cotton for the present and the past five seasons. The highest price touched for the best grade during each season is given, and the lowest price for the lowest grade. Also, the high and low price for "Fancy Georgias," which is the standard grade of the crop:

SEASON.	Crop. (Bales).	Highest Price.	Lowest Price.	Fancy Georgias. High.	Low.
1906-07.....	60,000	40c.	16c.	37c.	21c.
1905-06.....	123,364	23c.	15c.	23c.	17½c.
1904-05.....	102,668	23c.	11c.	21c.	17c.
1903-04.....	76,704	30c.	16c.	27c.	20c.
1902-03.....	102,634	23c.	12c.	19c.	18c.
1901-02.....	78,621	23c.	14½c.	22c.	27c.

[e—Estimated.]

Our correspondents write: "We omit quotations of genuine Island cotton. The Island crop is usually one-tenth of the total production, and consists principally of so-called 'crop lots,' which sell at very irregular prices, varying from 35 to 75 cents per pound in the same season for different crops, according to

## SAVANNAH PRICES (CENTS PER POUND) DURING THE ACTIVE MONTHS OF SEVEN YEARS.

	1900-01.	1901-02.	1902-03.	1903-04.	1904-05.	1905-06.	1906-07.
September.	21 -22	19 -20	18 -18½	-20	19½-20	18 -19	-22
October...	22 -24	18 -20	18 -18½	19½-20	19½-19¾	17¾-19½	22 -25½
November.	21 -23	18 -20	18½-19	20 -23	19 -20	17¾-18½	25½-30
December...	21½-22	21 -22	18¾-19½	-23	19 -20	18 -18½	30 -36
January....	22 -24½	-22	19½-20	23½-30*	18½-19	17½-17¾	35 -36
February...	21 -22½	-22	19½-20	-26½	-18	17 -18	34 -35
March.....	19 -21	22 -22½	19½-20	26½-28*	17 -18	18 -20	34 -36
April.....	17½-20	22½-23	19½-20	-28*	17 -18	20 -21	
May.....	17½-19	23 -23½	19½-20	25 -28*	-17½	-21	

\*Nominal quotations. Very little cotton sold at these figures. Prices declined to 21-22 cents in August.

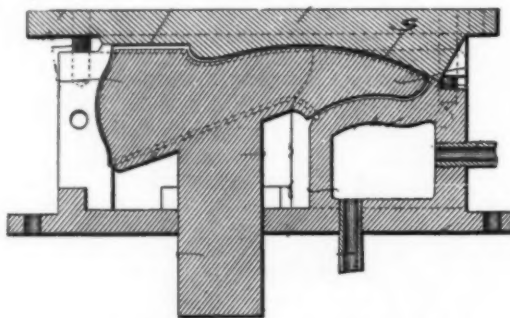
quality." The production of Sea Island cotton on the mainland is in the states of Florida, Georgia, and the Carolinas.

The impression prevails at Savannah that the present prices of Sea Island cotton are abnormal, and that lower prices will prevail next season. Since the above matter was put in type the government reports the last Sea Island crop at 57,352 bales.

## CLARK'S NEW SHOE MOLD.

AN improved mold for the manufacture of rubber footwear, to which the illustration relates, has for its objects a product neater in appearance than the molded shoe as ordinarily made, and the avoidance of one cause of damaged goods. With the four-part mold used hitherto, the side molds being divided on the center line of the bead of the shoe from heel to toe, there is usually formed upon the shoe a seam or rib of rubber, extending from the opening at the top of the shoe down across the instep. This not only detracts from the appearance of the shoe, but where these side molds join on the center line they are liable to pinch or crimp the lining of the shoes between the parts, causing damage to the product.

This invention provides for a five-part mold. In practice, a last, with the shoe made up on it, is placed in the machine, the



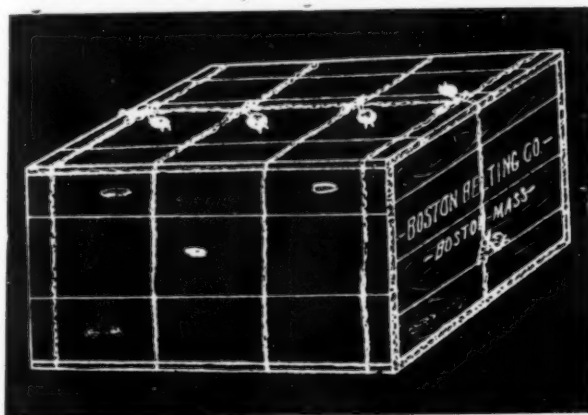
CLARK'S RUBBER FOOTWEAR MOLD.

last comprising one part of the mold. The second part is the instep mold, fixed stationary to the bed of the machine. The third and fourth parts are the side molds, which extend from the side of the shoe at a point to the rear of the instep back around the heel of the shoe. The sole mold, at the top of the machine, forms the fifth part. The beads or rims caused by the joining of the mold parts, instead of appearing at the front or across the instep portion of the shoe will be at the line of junction of the instep mold and the side mold and at the heel of the shoe.

The side molds are provided with heating chambers, so that they may be heated by steam, or otherwise, making of this a vulcanizing as well as a molding device. The inventor is Maurice C. Clark, of Providence, Rhode Island, to whom has been issued United States patent No. 842,859.

## IMPROVED PACKING OF RUBBER.

THE high value of crude rubber, compared with its weight, has always afforded a special temptation to larceny on the part of those engaged in handling it. The aggregate of the losses which have been sustained by the trade on this account is very great. In addition, there have been losses due to defective packing. With a view to protecting the owners of rubber against loss from either of the reasons mentioned, Mr. James Forsyth Bennet, of the Boston Belting Co., has suggested the idea of strapping and sealing bales, boxes, cases and bags of rubber, as illustrated herewith, and since putting into effect this idea his company have suffered no inconvenience. The cost of strapping



packages in this way is very slight, and even if it were many times as much as it is, the end apparently would justify the means, for in the very many cases that have been received and shipped by them, all have arrived at their destination in good condition. In addition to their own satisfaction, they have been accorded much praise and many words of appreciation for the ingenious and careful method of packing. Four lines crossing the sides of the box in the illustration and the single line across the end represent a strong wire, and the white spots on the top show how the sealing is done. It would seem that this might serve as a suggestion to the buyers of crude rubber which they would gratefully accept and profit by, with results as gratifying as those derived by the originator of this packing system.

## TIRE INTERESTS, HERE AND ABROAD.

AT the annual meeting of the Palmer Tyre Co., Limited (London) there was declared a dividend of 5 per cent, and the announcement was made that a substantial sum had been added to the reserve fund. The chairman also reported that a machine was about to be produced which would appreciably lessen the cost of production of the Palmer Cord tire.

It is rumored that his Majesty, King Edward VII, who was formerly advertised as being the user of various excellent automobile tires of English make, has become a convert to the use of the Continental tire. Whether he experimented personally and discovered that the Continental was the best does not appear. At any rate, one of his latest cars is fitted with them.

The Goodyear Tire and Rubber Co. (Akron, Ohio) are winning out exceedingly well with the use of their new rim for motor cycles, a difficult place to put any tire, or rather a type of vehicle from which it is difficult to detach and repair the ordinary tire.

An electric vulcanizer designed for repair men has been brought out by C. A. Schaler, of Wapun, Wisconsin.

The Sirdar Rubber Co., Limited, have received another repeat order from the British war office for Royal Sirdar Buffer tires.

The firm "Provodnik," of Riga, Russia, who have developed an important tire department in their extensive rubber works, are about to introduce their pneumatic and motor 'bus (solid) tires in the English market.

The K. T. Syndicate (London) are putting on the market a heavy tire designed to prevent side slip, the tread looking very much like an exaggerated Bailey tread, the huge rubber lozenges, however, being hollow and thus semi-pneumatic. The thought would be naturally that the wear on a tire of this type would be such that it would make it very expensive in use.

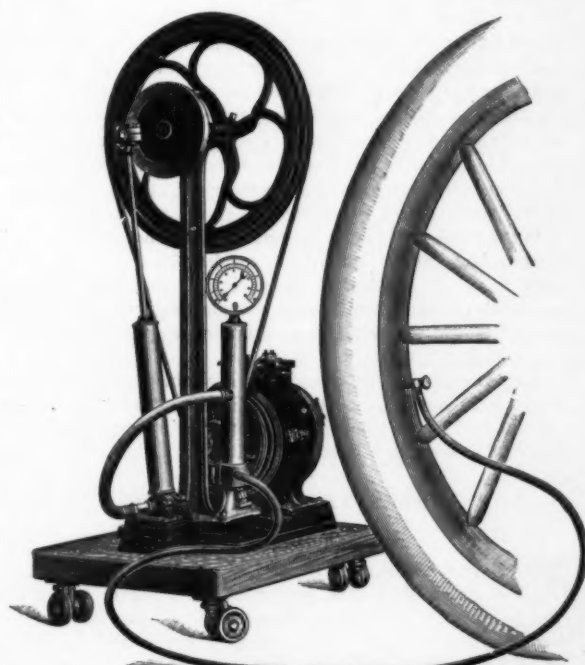
The Diamond Rubber Co. (Akron, Ohio) are offering to the trade, in addition to their ordinary lines of solid carriage tires, which, of course, are black or gray, a white tire. Not that it is as white as alabaster, but it is white, and as most rubber men know properly compounded white rubber is very tough and resilient and wears like iron.

The Philadelphia agency for Jenatz tires has been secured by Henry A. Rowan, Jr., No. 2028 Samson street. These tires, by the way, are new in the United States, but are made at Brussels under the supervision of Camille Jenatz, a well known European racing man.

The Kokomo Rubber Co. (Kokomo, Indiana) are out with a new cycle tire—the "New Oxford"—that is making very many friends.

Herz & Co. (No. 203 Lafayette street, New York) are importing a new pneumatic tire, made by the Wien-Traiskirchner Gummiwaren-Fabriken Josef Miskolczy & Co. (Vienna, Austria), which they market as the Herz Paragon. It has a specially constructed tread, the fabric on which lies in diagonally applied narrow sections.

The Morgan & Wright advertisements—white letters on black background—are so distinctive that they are recognized everywhere. Besides this, when they put in something like this—"Occasionally a rider will insist on having a cushion tire. We make them"—they are very readable. The "occasionally" tells the story.



"VICTOR" ELECTRICALLY OPERATED AIR COMPRESSOR, FOR INFLATING TIRES.

[Victor Electric Co., Chicago.]

### THE RUBBER TRADE AT TRENTON.

BY A RESIDENT CORRESPONDENT.

TRENTON has another new rubber concern in the Standard Rubber Manufacturing and Supply Co., which was incorporated lately and has already commenced business. For the present it will be a selling company exclusively. The authorized capital is \$100,000, of which \$75,000 is common stock and \$25,000 cumulative 6 per cent. preferred. The incorporators were Stephen C. Cook and Charles L. Conard, of Trenton; Ignatius Le Jambre, of Bordentown; and Albert A. Taylor, Jr., of Allentown, N. J. John M. Wright and A. Crozer Reeves, of Trenton, are stockholders. The concern was organized by electing Mr. Cook, president; Mr. Wright, secretary; and Mr. Reeves, treasurer. It controls several patents and will handle a line of specialties, one of which will be rubber blankets for newspaper presses.

This company succeeds the Standard Rubber Co., also of Trenton, for which a receiver has been appointed. The new company, however, has no connection whatever with the old Standard. Carroll Robbins, of Trenton, has been made receiver for the latter concern, and its affairs will be wound up. James D. Brady, of Trenton, was one of the moving spirits in and president of the old Standard. It is understood its financial troubles were due to his identification with the Consolidated Supply Co., of Syracuse, New York, which, it is said, is also bankrupt.

THE Atlas Rubber Co., of Trenton, was incorporated under the New Jersey laws on March 9. The incorporators are State Senator Barton B. Hutchinson, Harry R. Wilson, and Rachel Summer, all of Trenton. The authorized capital is \$125,000. The charter says the object of the company is the manufacture and sale of rubber goods. Representatives of the new corporation state that they are not yet ready to announce their plans. It is learned, however, that the erection of a factory in Trenton is planned. It is said that aside from Senator Hutchinson the incorporators named appear only as representatives of other interests. It is understood that J. Oliver Thorp, superintendent of the United and Globe Rubber Manufacturing Cos., of Trenton, and Malcolm Salter, assistant superintendent of the same company, will be identified with the new company.

Clifford H. Oakley, secretary and general factory manager of the Ajax-Grieb Rubber Co., has resigned his position. He is succeeded by Louis Detribats, formerly of New York, and who has been with the Ajax-Grieb company since the consolidation of the two concerns a few months ago. Mr. Oakley had been with the Grieb company seven years. He has not made public his future plans except that he will incidentally and in connection with W. F. Bambridge, formerly New England sales agent of the Grieb company, continue the manufacture and sale of rubber specialties for the shoe trade, operating as the Essex Rubber Co., with headquarters in Trenton.

The Automobile Wheel and Rim Co., the registered office of which is in Jersey City, has filed a certificate with the secretary of state at Trenton amending its charter by increasing its authorized capital stock to \$500,000.

### THE RUBBER TRADE IN SAN FRANCISCO.

BY A RESIDENT CORRESPONDENT.

THE large new permanent store of the Gorham Rubber Co. is assuming substantial proportions and within two months will be occupied by the company. It is a five story and basement building, located at Nos. 26-30 Fremont street, where a full line of belting, packing, and hose, tires, druggists' sundries, and footwear will be carried. Negotiations are now under way for the sale of the store in Oakland, because as soon as the San Francisco building is completed the company's business will be concentrated under one roof.

Mr. C. Kirkpatrick, of the Gorham Rubber Co., representing The B. F. Goodrich Co. here, states that business in the rubber line continues to increase so that it has been nearly double what it was last year at the same time. It seems that as fast as one demand is supplied new demands spring up and the demand from the old sources increase. San Francisco is a city of new enterprises and new life and activity and there is a call for rubber products such as has never before been known. The most remarkable business is being done in the rubber sundries line, the manufacturers having been unable to supply the demands of the trade. Next in importance of the high paying products have been automobile tires.

The Sterling Rubber Co.'s traveling salesmen are sending in good orders, and the management reports that business in all lines is good. They say that stocks are coming in now in better shape from the railroads, which is making conditions much pleasant for the trade.

The Harris Rubber and Supply Co., a new concern, in a new store at Polk and Turk streets, has been doing a good business from the start. It is a general rubber supply house with a complete vulcanizing plant. They are the uptown agents for the Goodrich tires in San Francisco.

### THE RUBBER TRADE IN AKRON.

BY A RESIDENT CORRESPONDENT.

THE shareholders of the Diamond Rubber Co. met recently to complete arrangements for the increase of the company's capitalization from \$3,500,000 to \$4,000,000. At another meeting, to be held April 16, the capitalization will be raised again to \$5,000,000. The directors decided upon this course about two months ago.

Members of the Diamond Rubber Co. have acquired practically all of the \$116,000 of capital stock issued thus far by the Bryant Steel Wheel and Rim Co., of Columbus, Ohio. The Bryant company make the Marsh rim, for which the Diamond company have been sole selling agents, and which has been constructed especially for use with the Diamond detachable automobile tires.

The Faultless Rubber Co. have about completed the removal of their factory equipment to the new factory at Ashland, which is expected to be in operation by April 1. The company's employees were taken to Ashland recently in two special trains, to give them an opportunity to look the town over, and about 50 of them, it is understood, will go to Ashland to live, taking their families. An Ashland manufacturer has become a large shareholder in the company, acquiring the shares of a former director who opposed the change of location.

The Star Rubber Co., the incorporation of which was reported in these notes last month, have begun the erection of an extensive factory building in South Akron, with a view to making a line of goods similar to that of the Faultless Rubber Co. Thus the number of Akron's rubber factories will not be lessened.

It is estimated that five-eighths of all the automobiles exhibited at this season's automobile shows in the United States are equipped with tires made in Akron. The local tire manufacturers made regular exhibits only at the national shows, but their tires have been in evidence at all the local shows, such, for instance, as that held at Cleveland during March.

The Miller Rubber Co. offered for sale recently \$50,000 each in preferred and common stock, all of which was taken promptly by local capitalists. Within the past few years a marked change has come over the attitude of Akron investors in regard to the rubber industry, and they now buy readily every share of stock of the leading companies that happens to be available.

Mr. Joseph W. Kelly has resigned as manager of the specialty sales department of The B. F. Goodrich Co., after having been in the Akron rubber business for 25 years, to devote the remainder of his life to the advocacy of municipal ownership.



## News of the American Rubber Trade.

### RUBBER GOODS—ANNUAL MEETING.

THE eighth annual meeting of the shareholders of the Rubber Goods Manufacturing Co., incorporated under the laws of New Jersey, is due to be held at the registered offices of the company in that state, No. 60 Grand street, Jersey City, on Wednesday, April 10.

At the last regular meeting of directors of the Rubber Goods Manufacturing Co. it was decided to discontinue the payment of dividends on the common stock, in view of the arrangements pending for the liquidation of the company. On October 15, 1906, a semi-annual dividend of 1 per cent. was paid, after a cessation of dividends on the common stock since the end of 1901. Had the directors decided to continue dividends, another declaration would have been made during the past month.

### COMPLETE OFFICE BUILDING PLANNED.

THE Boston Woven Hose and Rubber Co. are working on the detailed plans of what is designed to be a very complete administration building, to be located opposite their factory at Cambridge. Besides ample office accommodations and every facility for the transaction of business, this building will contain an assembly hall, dining rooms and recreation rooms. Mr. John O. DeWolfe, who for several years was associated with this company, is the architect.

### BAUMANN RUBBER CO.—INCREASE OF CAPITAL.

THE Baumann Rubber Co. (New Haven) have filed a certificate with the secretary of state of Connecticut of increase of their capital stock from the nominal figure of \$10,000 to \$100,000. They have added to their plant lately a new washer, mill and calander, from the Farrel Foundry, and some new presses and vulcanizers, and are planning to make theirs an exceptionally well equipped plant. Their specialties are balls and toys. The New York address of the company is now No. 79 Fifth avenue.

### TRENTON'S NEW TIRE COMPANY.

THE Empire Automobile Tire Co., the new Trenton concern, are preparing to market a tire of the clincher type, with a raised tread, and also inner tubes made by a special process, and tire sundries. The president is Charles H. Semple, mentioned in the last INDIA RUBBER WORLD as having resigned a long time connection with the G & J Tire Co. to accept the position. The treasurer is General C. Edward Murray, the principal shareholder in the Empire Rubber Manufacturing Co. and the Crescent Belting and Packing Co. The secretary is A. Boyd Cornell, also secretary of the Empire rubber company. The sales will be in charge of W. G. Whitlock, for some years past with the G & J company. The tires will be made at the Empire rubber company's plant.

### FACTORY ENLARGEMENT AT PERTH AMBOY.

THE Standard Underground Cable Co. (Pittsburgh, Pennsylvania) have added lately to the holdings of land at Perth Amboy, New Jersey, where one of their manufacturing plants is located, including their rubber factory. For the past 11 years the Standard company have had quite a large rubber covered wire department in connection with their other cable business, and in this department they have always mixed their own rubber compounds. It is now proposed to extend the Perth Amboy plant, with a view to enlarging the rubber covered wire and some other departments.

### FACTORY ENLARGED AT WALPOLE.

THE Massachusetts Chemical Co. (Walpole, Massachusetts), owing to the increase of their business in the manufacture of insulating and waterproofing compounds, insulating tapes and

the like, have been obliged to build a large addition to their factory, which has been equipped with the best of modern rubber machinery, and which practically doubles the capacity of the plant. They are, therefore, enabled to handle orders much more promptly than for some time past.

### A NEW INSULATED WIRE PLANT.

THE Bay State Insulated Wire and Cable Co. has been organized for the manufacture of rubber insulated wires and cables at Hyde Park, Massachusetts. The company is to be incorporated under the laws of Massachusetts, with \$250,000 capital. The president of the company is Andrew J. Conlin, who has long been engaged in the insulated wire trade, and latterly with the Morss Simplex Electrical Co. The treasurer and manager is John H. McNamee, late mayor of Cambridge, Mass., who is a successful business man. The company has secured the well-equipped plant constructed and long occupied by S. Klous & Co. (Boston Gossamer Rubber Co.), who were large manufacturers of waterproof clothing and went out of business in 1903, owing to the ill health of the senior Mr. Klous. The location is at River Street station, on the New York and New England Railroad, just outside the limits of Boston.

### RUBBER FACTORY FOR SALE.

THE factory and business of the Davidson Rubber Co., manufacturers of druggists' and stationers' sundries, at East Somerville, Massachusetts, are offered for sale. This measure has been decided upon in connection with the settlement of the estate of the late Rhodes Lockwood, president and treasurer of the company, who died in 1905, and who was the principal owner of the business.

### HARTFORD RUBBER WORKS CO.—NEW OFFICERS.

A NUMBER of changes in the official list of the Hartford Rubber Works Co. was made at a meeting of the directors on March 8. Thomas Midgley has resigned as president, in order to devote more time to the Midgley Manufacturing Co. (Columbus, Ohio), makers of the rims used by Rubber Goods Manufacturing Co., who now control the Columbus concern. Mr. Midgley retains his connection with the tire industry, however, as general consulting engineer for the Hartford and G & J companies and Morgan & Wright—a new position created for him. The new president is Justus D. Anderson, a former official of the Hartford Rubber Works Co., who recently became president of the G & J Tire Co., which position he will also retain. James W. Gilson, the secretary and treasurer of the Hartford company, having resigned to join an old friend in the Mitchell Motor Car Co. (Racine, Wisconsin), Henry Plow has been elected treasurer and assistant secretary, and E. R. Benson secretary and assistant treasurer. V. B. Lang, vice president of the company, has taken the additional title of general manager.

### MR. DRESSER OUT OF BANKRUPTCY.

A DISCHARGE in bankruptcy was granted in the United States district court in New York on March 5 in the matter of Dresser & Co., commission merchants in hosiery, silks and elastic webbing, adjudicated bankrupts July 9, 1903. One result of the failure of the firm—caused by its complications with the United States Shipbuilding Co.—was the enforced sale, in December, 1903, of the plant of the American Tubing and Webbing Co. (Providence, Rhode Island), in which Daniel Le Roy Dresser was a large shareholder. Mr. Dresser states that at the time of the failure Dresser & Co. owed \$1,400,000, and the estate has paid over \$1,000,000. The discharge in bankruptcy was influenced by a petition signed by the firm's creditors. The business of the firm has been continued by the receiver, at No. 71 Franklin street, New York, and Mr. Dresser now resumes control.

## NEW INCORPORATIONS.

GOODYEAR's Rubber Manufacturing Co., February 19, 1907, under the laws of Connecticut, to manufacture and deal in all kinds of india-rubber goods; capital, \$25,000. Incorporators: John J. Watson, Jr., Clintjan Van Vliet, Samuel Norris, Homer E. Sawyer and John D. Carberry. Principal office at Naugatuck, Conn.

Morgan Rubber Co., March 2, 1907, under the laws of Illinois, to make and deal in rubber goods; capital, \$75,000. Incorporators: A. A. Worsley, C. P. Kelly and G. P. Sayers. Principal office in Chicago.

Atlas Rubber Co., March 1, 1907, under the laws of New Jersey, to make and deal in rubber goods; capital, \$125,000. Incorporators: R. B. Hutchinson, H. R. Wilson and R. Summer. Principal office at Trenton, N. J.

I. B. Kleinert Rubber Co., February 28, 1907, under the laws of New York state; capital, \$1,800,000. To absorb the business of a West Virginia corporation of the same name capitalized at \$150,000, with a bond issue of like amount. The Kleinert company are the largest manufacturers of dress shields in the world. Some account of the business, founded by Mr. Kleinert about 28 years ago, appeared in THE INDIA RUBBER WORLD September 1, 1905 (page 401). The officers of the company are Isaac B. Kleinert, president; Victor Guinzberg, vice president and secretary, and H. A. Guinzberg, treasurer. Principal office, No. 725 Broadway, New York.

The Bowly Auto Pneumatic Tire Co., March 11, 1907, under the laws of New Jersey, to make and deal in rubber vehicle tires; capital authorized, \$100,000. Incorporators: William W. Gooch, James B. Mackie, Ralph B. Crummy, Frederick C. Schofield and John R. Turner. Registered agent and office: Corporation Trust Co., No. 15 Exchange place, Jersey City, N. J.

Michelin Tire Co., March 12, 1907, under the New Jersey laws; capital, \$3,000,000. Incorporators: Lorenzo Semple, No. 30 West Eleventh street, New York; John P. Murray, No. 61 Lembeck avenue, Jersey City, N. J.; James E. Hopkins, No. 71 Broadway, New York. It is understood to be the intention of Michelin et Cie., of Clermont-Ferrand, France, to engage in the manufacture of pneumatic tires in the United States.

## WORCESTER RUBBER CO.

THE newly incorporated Worcester Rubber Co. (Worcester, Massachusetts) succeeds to the business of Albert H. Bloss, who has become president of the company. The business becomes part of the Crocker Syndicate, Mr. Isaac Crocker being treasurer of the company. This house was established in June, 1877, by the late J. Francis Hayward, who conducted it under the style Worcester Rubber Co. In 1891 the interest of Mr. Hayward was bought by Colonel Aaron S. Taft, who had been manager of the store, and upon Mr. Taft's death, in 1894, Mr. Bloss succeeded in control. This, it is believed, is the third oldest rubber house in New England without change of name.

## LOSSES BY FIRE.

THE extensive buildings of the Hardman Rubber Co. (Belleville, New Jersey) were destroyed by fire on March 1, causing a heavy loss, though it is understood that the property was well insured. In addition to the Hardman company, losses were sustained by the Mattson Rubber Co. and the Imperial Rubber Works, whose manufacturing has been done at Belleville since the fire which destroyed their plants at No. 26 West Broadway, New York, on March 12, 1906. One of the buildings destroyed also contained the factory of the Kornit Manufacturing Co., who are making a substitute for hard rubber from the hoofs of cattle.

The Central Rubber Co., Chicago representatives of the National India Rubber Co., and dealers in rubber goods generally, were damaged by fire on March 3. The building, No. 84 Lake street, occupied by the company, was somewhat damaged, particularly by water, but the interruption of business was slight. The adjoining building, No. 82 Lake street, the upper stories of which the rubber company occupied for storage, fared worse.

The stock of goods was practically destroyed, but was fully covered by insurance.

A fire in the factory of the Hyde Park Rubber Co. (Hyde Park, Massachusetts) on March 13 is reported to have damaged stock to the amount of \$5,000 and injured the building slightly.

Regarding a fire at the rubber reclaiming plant of the New Jersey Rubber Co. (Lambertville, New Jersey) on March 4, THE INDIA RUBBER WORLD is advised that the damage did not exceed \$1,500, and this was fully covered by insurance. The principal loss was on stock, and the factory was closed only 2½ days.

## THE TRADE IN CANADA.

The Merchants' Rubber Co., Limited (Berlin, Ontario) have had plans drawn for an important extension of their plant, and have placed orders for steam boilers to double their present outfit. The new directors of the company are E. B. Nesbitt, D. Lorne McGibbon, F. W. Ward, A. J. Kimmell, and T. H. Rieder. Mr. Kimmell has made a success of the Elmira Felt Boot Co., at Elmira, near Berlin.

Mr. J. C. Nicholson, who has been in the employ of the Canadian Rubber Co., of Montreal, Limited, for a number of years, has been made manager of the general rubber goods division of the company, at the home office.

It is reported that a new rubber factory is to be erected at Berlin, Ontario. The *News Record* of that town says that an option has been obtained on land suitable for a site, and that plans are under way for a concrete factory building, with equipment for a capacity of 5,000 pairs of rubber shoes per day.

L. Higgins & Co. have obtained the agency in the Canadian maritime provinces for the Robinson & Lindsay Rubber Co. (Toronto), and have become established at No. 166 Granville street, Halifax, Nova Scotia. Messrs. Higgins have been selling agents for some years of the "Maple Leaf" brand of rubbers, and will add the sale of the leather footwear distributed by the Robinson & Lindsay Co.

Boomer & Boschert Press Co. (Syracuse, New York), whose rubber presses are used in so many rubber factories, have established a factory at Montreal, which will be operated under the style Canadian Boomer & Boschert Press Co., Limited.

## TRADE NEWS NOTES.

THE Boston Woven Hose and Rubber Co. paid the usual semi-annual dividend of \$4 per share on the common stock on March 15, to holders of record on March 5.

The National India Rubber Co. (Bristol, Rhode Island) have increased their output of hose from 12,000 feet to 15,000 feet per day.

The Globe Mills Rubber Co. (Lawrence, Massachusetts) are turning out an attractive line of footwear. They have an excellently located plant and own valuable water privileges and have a capacity of 15,000 pairs daily.

The B. & R. Rubber Co. (North Brookfield, Massachusetts) will soon add tubing to their line of products.

The New England Rubber Manufacturing Co. (Hyde Park, Massachusetts), occupying the plant before used by the Maderia Rubber Co., are doing a good business in making rubber heels and toilet specialties. Mr. A. A. McLaren is in charge of the management.

Mr. James R. Ross, of Jamestown, New York, has resigned the presidency of the Niagara Rubber Co. (Lockport, New York) on account of ill health, being succeeded by the Hon. Patrick F. King, an attorney of Niagara Falls.

The Simplex Electrical Co. (Boston) have awarded a contract for a four-story machine shop, of reinforced concrete, 100 x 110 feet, as an addition to their factory at Cambridge, Massachusetts.

The Hartford Rubber Works Co. have instituted an action in the United States Circuit Court for the southern district of New York, alleging infringement of the Dunlop tire patent by the Goodyear Tire and Rubber Co. and the Firestone Tire and Rubber Co. The patent involved is No. 488,492, issued December 20, 1892.

**COTTON DUCK PROFITS.**

THE annual report of the Consolidated Cotton Duck Co. for 1906 shows gross income from sales of \$9,941,151.29, against \$9,268,871.94 for 1905. Net earnings were \$1,301,881.39, against \$917,172.08 for 1905. The report covers the first full year since the merger of the United States Cotton Duck Corporation (which has now ceased to exist) and the Mount Vernon-Woodberry Cotton Duck Co. An important event during the year was the acquisition of the entire capital stock of the J. Spencer Turner Co. (New York), which house has become the sole distributing agency of the Consolidated Cotton Duck Co., to the great advantage of the latter. The duck company own 20 mills in six States and Canada and Nova Scotia. There are 7,500 operatives and 55,000,000 pounds of raw cotton were consumed last year. The valuation of properties is reported at approximately \$18,000,000. The earnings for 1906, after providing for the 6 per cent. on the preferred stock (\$6,000,000) left a surplus equal to nearly 8 per cent. on the common stock (\$7,000,000).

The regular semi-annual dividend on the preferred shares of 3 per cent. is payable on April 1.

**WALTER K. FREEMAN SENTENCED.**

IN the New York court of general sessions, Part 1, on March 15, Judge Rosalsky imposed a sentence upon Walter K. Freeman, who had been found guilty of grand larceny in the first degree, on trial before Judge Rosalsky and a jury, confining him for a term of three years in State's prison. The attorneys for the defendant moved for a new trial, and, pending decision by the court, Freeman was remanded to the city prison. In the latter part of 1904 a contract was entered into between Parke, Davis & Co., manufacturing chemists, and Freeman in relation to the manufacture of camphor synthetically by a process which Freeman claimed to be developing. It was agreed that Freeman should receive \$15,000 for experimental purposes within a period of one year. At the expiration of that time, no results having been obtained, Parke, Davis & Co. commenced a civil action against Freeman to compel an accounting for the moneys turned over to him. It developed that one particular item of \$2,400 alleged by Freeman to have been paid by him for platinum had not been expended for such purpose, and that while this contract was in effect Freeman was collecting money from other firms on similar terms. Parke, Davis & Co. thereupon laid the matter before the district attorney for New York county, who caused Freeman to be arrested for grand larceny. He was indicted on this charge in August, 1906, and tried before Judge Rosalsky in January last, with the result above named.

Considerable space was devoted to Freeman in THE INDIA RUBBER WORLD, January 1, 1903 (page 121), at which time he was reported to have secured considerable sums from persons in the rubber trade, but more largely from persons not in the trade, to aid him in the manufacture of a process rubber or substitute from a secret formula. Freeman was understood to have been the leading spirit in the so-called American Crude Rubber Co., incorporated August 22, 1902, under New Jersey laws, with an authorized capital of \$2,000,000, which company purported to have for its object the manufacture of the substitute referred to.

**WASTE RUBBER THAT IS DUTIABLE.**

AN importation of waste rubber at New York included some new cuttings, which the collector decided did not come under the provisions of paragraph 579 of the Tariff act, relating to "old scrap or refuse india-rubber, which has been worn out by use and is fit only for remanufacture." The remainder of the consignment was old scrap rubber, such as is admitted free of duty, but the collector held that the onus was on the importer to show what proportion of the goods are free and what dutiable, and a duty of 10 per cent. was assessed on the whole as materials not enumerated in the act. This action was confirmed by the general appraisers at New York. This is not the first time that the ques-

tion of assessing a duty on imported new cuttings of rubber has been considered. THE INDIA RUBBER WORLD is informed by some of the importers that they have paid duties on such material, and at the office of the collector of the port at New York it is stated that the practice here has been uniformly to assess 10 per cent. *ad valorem* on such goods, under paragraph 463 of the Tariff act, the appraisers having rendered at least four decisions sustaining this course prior to the one above mentioned.

**RUBBER FOOTWEAR PRICES IN CANADA.**

NEW lists on rubber footwear were issued by the Canadian manufacturers on March 4—eight days earlier than last year. Prices are somewhat higher than in the past season. Men's plain overs are listed 5 cents per pair higher; men's boots from 5 to 25 cents higher; lumbermen's 5 to 10 cents, and so on. The advance in women's footwear is less marked, and in a number of items no change is made. The discount to retailers is 15@3 per cent., against 20 per cent. last year and 17 per cent. in the year before that. A special discount of 5 per cent. is allowed on orders placed before May 1, and shipped before November 1, 1907. A similar discount for early orders was allowed last year. Besides these discounts, and the customary discounts for cash, the manufacturers allow a bonus rebate, to be governed by the volume of orders given by the purchaser during the season.

**BOSTON AUTOMOBILE SHOW.**

THE fifth annual Boston Automobile and Power Boat Show (March 9-16) was held under the auspices of the Boston Automobile Dealers' Association, Inc., and as last year under the management of Mr. Chester I. Campbell. It was successful in every way, the large attendance indicating the appreciation by New Englanders of an opportunity of acquainting themselves with automobile progress and making purchases nearer than New York. There were 342 exhibitors of automobiles and accessories listed, and the number of cars shown was greater than at either of the two New York shows or that at Chicago. For the most part the tire manufacturers have decided to exhibit only at New York and Chicago—at the so-called "national" shows—but the tire feature at Boston was by no means lacking in interest. Among the exhibitors of tires or rims were The Republic Rubber Co., Pennsylvania Rubber Co., Voorhees Rubber Manufacturing Co., Dow Tire Co., Trident Tire Co., Burmester Rubber Co., The Ennis-Ruff Tire Co., Hopewell Brothers, Healy Leather Tire Co., The Crescent Parts Co., Presto Detachable Rim.

**CHICAGO VULCANIZING CO.**

THE Chicago Vulcanizing Co. (No. 1461 Michigan avenue, Chicago) are an incorporated concern engaged in the repair and sale of all makes of automobile tires; in addition they are the western selling agents for the Harburg tire, made by the Vereinigte Gummiwaren-Fabriken Harburg-Wien, of Germany. This agency was secured at the time of the Chicago automobile show, when the Electric line, which they had carried for the previous year, was dropped. John W. Benton, lately with the Goodyear Tire and Rubber Co. (Akron, Ohio), has recently become vice president. H. W. Terriere is president and John Boss superintendent.

**OPENING OF THE SALEM RUBBER CO.**

THE Salem Rubber Co. (Salem, Massachusetts), the incorporation of which was reported in the last INDIA RUBBER WORLD, have begun business. The formal opening of their store, at No. 156 Essex street, on March 16, was largely attended. It is the first exclusively rubber store in Salem and contains a wholesale and retail stock of rubber goods generally. As mentioned already, this is one of the Crocker Syndicate stores, under the general management of Mr. Isaac Crocker, of Providence, Rhode Island.



## TRADE NEWS NOTES.

MESSRS. FRED W. WORK and B. I. MAXSON, of the B. F. Goodrich Co. (Akron, Ohio) plan to leave New York on May 1 for a transcontinental trip in a 40 HP. Oldsmobile, returning to New York by the same way after a short sojourn on the Pacific coast.

Goldberg & Rathman (Boston) are importing considerable waste rubber. Their imports recently embraced a shipment from Bermuda.

The annual meeting of shareholders of the Consolidated Rubber Tire Co. will be held on May 6 at the registered offices of the company at Jersey City, New Jersey. It is understood that the report to be submitted by the directors on the business during 1906 will show an important increase in the amount of gross sales and in net earnings.

The shares of the American Can Co. have been listed on the New York Stock Exchange.

One of the largest orders for pneumatic tires yet placed with any factory is that received by the Ajax-Grieb Rubber Co. (New York and Trenton) for 5,000 sets of tires, from the Ford Motor Co., for use on four-cylinder runabouts. Delivery is to be completed before August 1 next.

The B. F. Goodrich Co. (Akron, Ohio) are receiving good reports on the results from their "Tough Tread" tires, the merit of which is due to the fact that the tread is not a cemented strip liable to peel and separate from the body of the tire, but is made of a specially tough rubber which is an integral part of the tire.

A card headed "Resolutions for 1907, for Automobilists and Others"—good resolutions, by the way—is being distributed by Morgan & Wright (Detroit, Michigan) with a suggestion that it be hung up where it can be seen.

The Firestone Tire and Rubber Co. (Akron, Ohio) have established a very complete tire repair plant, including a vulcanizer with a capacity for 40 tires, in connection with their branch office at No. 233 West Fifty-eighth street, New York. They have also established a branch at Pittsburgh, Pennsylvania, in charge of C. E. Jackson.

The Stoughton Rubber Co. (Stoughton, Massachusetts) have been sued for \$25,000 by Patrick I. Beagin, who claims to have sustained personal injuries by being burned through an explosion of gasoline while employed as night watchman at the company's factory.

The Manhattan Rubber Manufacturing Co. have endowed a bed permanently in the General Hospital at Passaic, New Jersey, for the use of any persons who may be injured in their factory or become ill while at work there. Whenever not occupied for such purpose the bed will be at the disposal of the hospital.

The store at Meriden, Connecticut, of the Alling Rubber Co. (New Haven) has been closed, owing to the ill health of Mr. N. E. Alling, forcing him to curtail his business activities. The stock was taken over by the other stores in the syndicate.

The Keasbey & Mattison Co. (Ambler, Pennsylvania), large manufacturers of asbestos goods, in connection with some of which rubber is used, have established a branch house at Omaha, Nebraska, making 15 branches now operated by the company.

The directors of the Waterbury Co., of New York, insulated wire manufacturers, have declared the regular quarterly dividend of 2½ per cent. on the preferred shares and 1 per cent. on the common shares, payable April 1.

William Sanford, Jr., & Co., No. 903 North Broad street, Philadelphia, have taken the representation in that city of the tires made by Torrilhon et Cie., at Clermont-Ferrand, France.

The manufacture and sale of the high resistance materials for packings, developed by Fred M. Eckert [see THE INDIA RUBBER WORLD, January 1, 1907—page 130], have been taken on by The B. F. Goodrich Co. (Akron, Ohio). This arrangement takes the place of the incorporation of a company at one time projected by Mr. Eckert.

## TRADE NEWS NOTES.

THE coroner's jury which inquired into the death of an employee of a St. Louis rubber cement company returned a verdict of accidental death, but condemned the manufacture of rubber cement within the city limits, "even with the strictest compliance with the law," as "extremely hazardous to life and property."

Mr. D. G. Armstrong, manager of The Household Rubber Co., dealers in hard and soft rubber goods (Youngstown, Ohio), has perfected a line of canvas soles, as a substitute for leather soles, for the use of steel and iron workers. The same material has been found a satisfactory substitute for the cuffs and aprons used by the same class of workers, and for the leather pads used in connection with horseshoers.

The value of lime in rubber compounding for the absorption of moisture and prevention of blistering has been known for many years. It is interesting, therefore, in this connection to note that Mr. William H. Scheel (New York) has brought out two grades of lime, which stocks are already largely used in the rubber trade, being sold under the names, "Lime Flour" and "Hydro Calcline."

The Hope Webbing Co. (Pawtucket, Rhode Island,) are installing a complete slasher ventilating apparatus, consisting of steel plate fan, piping, hoods, etc., furnished by the B. F. Sturtevant Co., of Boston.

The Pittsburgh Rubber Supply Co. have enlarged their sphere of action by opening a western office which is located at No. 225 Dearborn street, Chicago.

O. C. Pike, No. 128 West South street, Akron, Ohio, is conducting a jobbing business in druggists' sundries and other rubber specialties, the goods he handles being of Akron manufacture.

The Dryden Rubber Tire Co. (No. 447 Wabash avenue, Chicago) will act as agents for the Republic Rubber Co.'s tires, and conduct a tire repair shop.

Following the election of State Treasurer Frank O. Briggs as United States senator, there has been launched for Quartermaster General Murray a boom for the Republican nomination for governor of New Jersey next fall. Senator-elect Briggs was looked upon as a probable candidate in all sections of the state. General Murray is also mentioned as a candidate for the chairmanship of the Republican state committee if the duties of Mr. Briggs as United States senator should make it necessary for him to resign that office.

The officers of the Utica Rubber Co. (Utica, New York), the incorporation of which was reported in these pages last month, are: E. B. Pearson, president and treasurer; G. E. Vanderbilt, assistant treasurer; Charles W. Barnes, secretary. Mr. Pearson will divide his time between the new company and the Tremont Rubber Co. (Boston), spending part of every week in each city.

Mr. C. E. Little is now in charge of the office and store of The Beacon Falls Rubber Shoe Co., of New York, at No. 106 Duane street, Mr. La Vete C. Warner having retired from that position on account of ill health. Mr. Little was with the Beacon Falls company at the start, though not since continuously connected with them.

American Chiclé shares during 1906 were quoted as follows: Preferred—Highest, 201; lowest, 158; closing, 193 bid, 200 asked. Common—Highest, 110; lowest, 100; closing, 100 bid, 110 asked.

The Apsley Rubber Co. (Hudson, Massachusetts) are sending out desk calendars that are very dainty and practical. A background of crystalloid sets off a view of the factories of the company, while silver corners outline the calendar pad and tip the crystalloid center.

The Meyer Rubber Co. have sent out to the trade an advertising card which is very interesting, because of the optical illusion that it illustrates. It is a green card with white lettering, and while the lettering is perfectly flat, it is so printed and shaded that one looking at the card would feel sure that the letters bulged out in the middle a very considerable distance from the background.

**NEW ENGLAND RUBBER CLUB.**

THE annual election of officers of the New England Rubber Club will occur on the evening of April 15, at the American House, in Boston, on which occasion there will be a "smoker" and vaudeville entertainment.—The Club has been admitted to membership in the Massachusetts State Board of Trade [See THE INDIA RUBBER WORLD, March 1, 1907—page 186], and will be represented in the latter by three delegates: Alexander M. Paul, Arthur W. Stedman, and William H. Gleason. Of these, Mr. Paul has been elected a vice president of the Board of Trade.

**THE UNITED STATES-CUBA CABLE.**

THE Commercial Cable Co. of Cuba, incorporated under the laws of New York in September last, have awarded a contract to the India Rubber, Gutta Percha and Telegraph Works Co., Limited (London), to build a cable to connect Key West, Florida, with Cuba. The cable is to be in operation by September, 1907, and the work of manufacture is in progress. The cable company is affiliated with the Commercial Cable Co. (New York) and will land in Cuba under a concession from the government of that island dating from January 10, 1907.

**ALLEGED INFRINGEMENT OF THE GRANT PATENT.**

A MOTION for a preliminary injunction in the suit of the Consolidated Rubber Tire Co. v. Sweet Tire and Rubber Co. (Batavia, New York) was argued recently before Judge Hazel in the United States district court at Buffalo. It is alleged that the defendant company have infringed the Grant patent for solid rubber tires, owned by the plaintiffs. It is understood that the plaintiffs are willing to discontinue the action if the defendants will recognize the patent and take "out a license for manufacturing under it." The defendants' counsel asked for time to decide whether to defend the suit or accept the above offer, and the court allowed two weeks for this purpose.

**PENNSYLVANIA RUBBER CO.**

MR. FRANK A. WILCOX has resigned as vice president of the Pennsylvania Rubber Co. (Jeannette, Pa.), but retains his interest and is still a director, though now taking no active interest in the management. The officers at present are: Herbert DuPuy, president; H. Wilfred DuPuy, vice president and treasurer; G. W. Shiveley, secretary; Wilbur Dunbar, general superintendent. Roger B. McMullen (No. 1241 Michigan avenue, Chicago) has been appointed general sales agent for the company's automobile tires. He was lately manager for the American Motor Car Manufacturers' Association, and for years a large jobber of bicycle parts.

**UNITED STATES RUBBER CO. SHARES.**

SALES of shares of the United States Rubber Co. on the New York Stock Exchange during the week ended March 23 were as follows:

	Sales.	Highest.	Lowest.
Common stock.....	4170	47½	43½
First preferred.....	2110	105	100
Second preferred.....	1410	76	71½

The closing prices for the week were the lowest since January 1. The highest prices for the year have been: Common, 52½; first preferred, 109¾; second preferred, 78¾.

**FACTORY EXTENSION AT TORONTO.**

THE Dunlop Tire and Rubber Goods Co. (Toronto, Ontario) have in course of erection in addition to their present plant a two-story reinforced concrete building, 200 x 60 feet, which will be devoted to the manufacture of mechanical rubber goods. The ground floor will be used for the manufacture of belting, matting, mats, and packing, and all sorts of molded specialties. The top floor will be used for making hose, and the very latest modern hose machinery will be installed, including weaving machines for jackets for cotton rubber lined fire and mill hose. The hose machinery for making rubber covered hose will be especially adapted for making a large amount of goods daily. Although

the present new Dunlop factory has been running just a little over a year, it has already been found necessary to install new calenders, grinders, and rubber washers, as well as to double its floor area.

**MICHELIN TIRES IN AMERICA.**

THE recent visit to the United States of M. Edouard Michelin, one of the proprietors of the important rubber works at Clermont-Ferrand, France, was in relation to establishing the manufacture of the Michelin pneumatic tires in this country. Before starting home M. Michelin, at a dinner he gave to some friends in New York, stated: "We came to the United States because, notwithstanding the fact that we have to pay an enormous duty, we sell here a large quantity of tires. Our own representatives in this country sold last year over 16,000 tires, and contracts made by them for 1907 amount to over 20,000 tires."

During M. Michelin's visit the Michelin Tire Co. was incorporated under the laws of New Jersey, with \$3,000,000 capital authorized, and negotiations were begun for acquiring a manufacturing plant. Such negotiations have been opened, particularly with the International A. & V. Tire Co. (Milltown, New Jersey), but at the date of this publication nothing has been concluded.

**A NOTABLE JOURNALISTIC SUCCESS.**

THE Boston *Boot and Shoe Recorder*, known wherever footwear is made or sold, whether rubber shoes or otherwise, will celebrate, with the issue of April 3, the twenty-fifth anniversary of its consecutive and successful publication. The *Recorder* has been in the front rank of progress in trade journalism for the past quarter century, contributing not a little to the maintenance of the high standard which characterizes American class or special journals. There were few trade papers when Mr. W. L. Terhune started the *Recorder*, so that he has been a pioneer in many respects in the development of this class of journalism to the important place which it now occupies, together with Mr. Charles H. McDermott, who has been in editorial charge for the past 23 years, Mr. Terhune taking care of the business department. The staff of the paper meanwhile has become large, but space will be given here only to the name of Mr. G. E. B. Putnam, editor of *The Recorder's* rubber trade and other special departments, and whose work has given him an extensive acquaintance in the rubber trade. The paper was the first published in the interest of the shoe retailer, but the scope has been enlarged until it serves in an important way the manufacturing interest as well, and has been the means of developing and widening the footwear trade as a whole.

**TRADE NEWS NOTES.**

THE Faultless Rubber Co. have removed their general offices from Akron to Ashland, Ohio, and hope to have their new factory, in the latter city, in full operation not later than April 15.

A branch of Pirelli & Co. (Milan), for the sale of their automobile tires in the United States, has been established in New York, where the interests of the Italian firm will be looked after by the National Sales Corporation, No. 296 Broadway.

In regard to the financial situation, Albert B. Beers (broker in crude rubber and commercial paper, No. 68 William street, New York), advises us:

"During March the money market has not been in condition to admit of banks in New York and vicinity buying much paper, and the demand has been very light, and at full rates ranging from 6 at 7 per cent. for the usual run of rubber names."

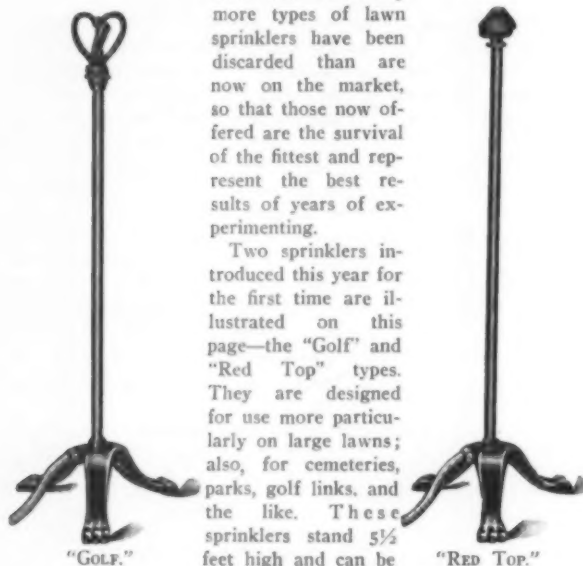
Jenkins Brothers, the valve manufacturers, have become a corporation, under the laws of New Jersey; capital, \$750,000. Incorporators: H. D. Gordon, A. E. Brady, and F. T. Swain, all of Elizabeth, N. J. The rubber department of this business, with works at Elizabeth, has been incorporated as the Jenkins Rubber Co. since 1894.

## NEW LAWN SPRINKLERS.

THE lawn sprinkler business of late years has become highly specialized, and involves constant study in the development of new ideas, with a view to giving the best possible service.

It is said that many more types of lawn sprinklers have been discarded than are now on the market, so that those now offered are the survival of the fittest and represent the best results of years of experimenting.

Two sprinklers introduced this year for the first time are illustrated on this page—the "Golf" and "Red Top" types. They are designed for use more particularly on large lawns; also, for cemeteries, parks, golf links, and the like. These sprinklers stand 5½ feet high and can be used with either ¾



inch or 1 inch hose. They present an attractive appearance on

the lawn and, distributing water, as they do, from a considerable height, the spray is converted into a fine mist before it reaches the ground. [W. D. Allen Manufacturing Co., No. 151 Lake street, Chicago.]

## ATTRACTIVE RUBBER HEELS.

A NEW line of rubber heel pads bears the brand "Nobbie M. R. W." They are referred to as being durable and to offer protection against slipping, besides being particularly neat in appearance and supplied to fit neatly. These claims are supported by the manufacturers with a guarantee "such as is made on tires." The "Nobbie" brand of goods is made by the Milford Rubber Works (Milford, Illinois), who are reported to be turning out some 15,000 pairs of heels daily. Any dealer who may be interested can obtain a neat hanger card, illustrating these goods, on application.



R. L. KINGSTON has resigned as manager of the Harburg Tire Co. (New York), being succeeded by Frank G. Hill. Mr. Kingston is now connected with The Crescent Parts Co. (Broadway and Fifty-sixth street, New York), marketing the "Crescent," formerly called the "Harburg" removable rim.

A STATEMENT was made by one of the receivers of the Ubero Plantation Co., in court in Boston, that the affairs of that ill-fated concern probably would be wound up shortly, with the payment of 50 per cent. of the creditors' claims.

## Review of the Crude Rubber Market.

A DECLINING tendency in the crude rubber market has existed for a month past, after an exceptional absence of fluctuations for some weeks, March closing with lower prices than have been quoted in these pages since January, 1905. There are indications that the current Pará crop may be larger than in any former year, but not sufficiently so to account for a lower price level. The reason for easier prices is to be found rather in less activity in the consuming market. A question which is uppermost in the trade to-day is how long the conditions which have led to this result are to continue.

While general trade conditions have been good, and apparently continue so, the recent decline of railway and other corporation shares—though evidently resulting from a political movement, rather than from business causes—doubtless has had a cautionary effect upon industrial enterprise, leading to a checked demand for goods. For example, important projected railway improvements are known to have been halted, and the demand for supplies is less pressing. The hope is entertained, however, that the present situation is only temporary, and, in fact, its effect has not been felt in all lines of trade. Undoubtedly renewed activity in rubber buying would at once lead to an advance in prices. It is to be noted that no decline in cotton prices has been experienced, and caustic rubber manufacturers are not likely to figure on lower priced rubber until the indications that it is safe to do so have become more pronounced than is now the case.

As reported on another page, the last Antwerp sale showed a slight decline. Prices realized at the London auction of March 15 were practically on the same basis as on March 1. Some of the medium grades, particularly Centrals, have shown a firm tendency throughout.

The February arrivals of rubber at Pará (including cancho) were a little larger than for any previous month in the history

of the trade, with one exception. The March arrivals are expected to exceed 5,000 tons. Comparative figures for three years:

	1904-05.	1905-06.	1906-07.
First six months.....tons	13,300	14,690	14,720
January .....	4,590	5,710	3,780
February .....	4,320	3,920	5,060
March .....	5,000	3,700	44,210
Total to April 1.....	27,210	28,020	27,770
[a To March 21.]			

## New York quotations:

PARA.	Apr. 1, '06.	Mar. 1, '07.	Mar. 29.
Islands, fine, new.....	124 @125	118@119	116 @117
Islands, fine, old.....	none here	none here	none here
Upriver, fine, new.....	129 @130	122@123	118 @119
Upriver, fine, old.....	130 @131	126@127	121 @122
Islands, coarse, new.....	73 @ 74	71 @ 72	67 @ 68
Islands, coarse, old.....	none here	none here	none here
Upriver, coarse, new.....	94½ @ 95	907 @ 98	92 @ 93
Upriver, coarse, old.....	none here	none here	none here
Caucho (Peruvian) sheet..	74 @ 75	77 @ 78	75½ @ 76
Caucho (Peruvian) ball...	88 @ 89	95 @ 96	86 @ 87
Ceylon, fine sheet.....	none here	137 @138	137 @138

## AFRICAN.

Sierre Leone.....	
1st quality.....	104 @105
Massai, red.....	104 @105
Benguella .....	76½ @ 77
Cameroon ball.....	78 @ 79
Accra flake.....	20½ @ 21
Lopori ball, prime.....	110 @112
Lopori strip, prime.....	102 @103
Madagascar, pinky..	88 @ 89
Ikelemba .....	111 @112
Soudan niggers.....	91 @ 92

## Late Para cables quote:

Per Kilo	Per Kilo.
Islands, fine.....	58600
Islands, coarse.....	38050
Exchange, 15¼d.	
Upriver, fine.....	68500
Upriver, coarse.....	48500

## CENTRALS.

Esmeralda sausage.....	88@89
Guayaquil strip.....	73@74
Nicaragua scrap.....	87@88
Panama slab.....	69@70
Mexican scrap.....	89@90
Mexican slab.....	69@70
Mangabeira, sheet.....	59@60
Guayule .....	@48

## EAST INDIAN.

Assam .....	94@95
Borneo .....	48@62



**Statistics of Para Rubber (Excluding Caucho).**

NEW YORK.		Total.		
	Fine and Medium.	Coarse.	1907.	1906.
Stocks, January 31.....	Tons 124	4 = 128	224	157
Arrivals, February.....	1542	663 = 2205	1652	1370
Aggregating .....	1666	667 = 2333	1876	1527
Deliveries, February.....	1478	659 = 2137	1518	1391
Stocks, February 28.....	188	8 = 196	358	136
PARA.		ENGLAND.		
	1907.	1906.	1905.	1907.
Stocks, Jan. 31...Tons	965	1460	1256	345
Arrivals, February.....	4030	3150	3430	804
Aggregating .....	4095	4610	4686	1149
Deliveries, February...	4510	3873	3876	700
Stocks, February 28..	485	737	810	449
World's visible supply, Feb. 28....Tons	1907.	1906.	1905.	
Para receipts, July 1 to February 28....	20,760	21,469	19,456	
Para receipts of Caucho, same dates....	2,650	2,845	2,504	
Afloat from Para to United States, Feb. 28	634	745	1,898	
Afloat from Para to Europe, Feb. 28.....	1,250	970	745	

**Plantation Rubber From the Far East.****EXPORTS FROM CEYLON.**

	Pounds.
Total Exports, 1905.....	168,547
Deduct rubber from Malaya.....	300
Total from Ceylon.....	168,247
Total exports, 1906.....	417,661
Less rubber from Malaya.....	81,175
Less rubber from Indo-China.....	9,462
Total from Ceylon.....	327,024

**Distribution of 1906 Exports.**

	Pounds.		Pounds.
Great Britain.....	285,722	Belgium .....	4,672
United States.....	105,172	Australia .....	3,581
Germany .....	12,522	Straits .....	28
France .....	5,964		
Ceylon exports were 72,040 pounds in 1904 and 41,684 pounds in 1903.			

**Weekly Ceylon Exports, 1907.**

	Pounds.		Pounds.
Week ending Jan. 7.....	—	Total, 1907.....	26,418
Week ending Jan. 14....	17,870	Same dates, 1906....	22,089
Week ending Jan. 21....	889	Same dates, 1905....	5,183
Week ending Jan. 28....	4,194	Same dates, 1904....	6,197
Week ending Feb. 4.....	3,465		

**EXPORTS FROM THE MALAY STATES, 1906.**

	Pounds.		Pounds.
Great Britain.....	680,266	Australia .....	9,198
Europe .....	53,867	Ceylon .....	53,916
United States.....	13,467		
Japan .....	7,057	Total .....	817,771
From Singapore .....	1905.	1906.	
From Penang .....	180,533	719,135	
	48,267	98,636	
Total .....	228,800	817,771	

The consumption of Far Eastern plantation rubber in America has been much larger than is indicated by the above figures, on account of the exports here from Europe.

**AT THE AUCTIONS.**

LONDON, March 1.—Offerings of plantation rubber to-day were the largest yet recorded, the Malay States contributing about 31 tons and Ceylon 8 tons. The highest price was 5s. 9½d@5s. 10d. [= \$1.41 4-5], paid for 11 cases good pale crepe from the Valambrosa Rubber Co., in Klang. Several lots of block brought less than was paid formerly for this description, probably because

of a new method of treatment, which leaves more moisture in the rubber. For a number of lots from Ceylon 5s. 9d. [= \$1.39 4-5] or a fraction more was paid. One case of Ceara biscuits brought 5s. 9d. Para scrap brought up to 4s. 7d. [= \$1.11]. Fine hard Amazon Para sold at 5s. 1¼d. [= \$1.24½].—*Lewis & Peat.*

ANTWERP, February 22.—At the large auction to-day something like 5¼ tons of Malay States plantation rubber, in several small lots, realized from 7½ to 85 centimes above the broker's valuation. The highest price paid was 16.35 francs per kilogram [= \$1.43 per pound] for a fine lot of crepe rubber.

**Para.**

R. O. AHLERS & Co. report [March 1]:

Our market, since our last report, has not shown much animation, but prices have been maintained, owing to the steadiness of consuming centers. There is no doubt that very large quantities are still accumulated in the *sertao* regions, but as the rivers are still so low, at this advanced time of the season, great apprehension is felt in some quarters as to whether several steamers from there will be enabled at all to come down, especially since nearly all the river steamers have suffered heavy damages, and are partly unable to proceed.

The *Brasilian Review*, published at Rio, had this information in its issue of February 12: "Owing to the rivers being low, entries of rubber are later than usual at Manaus and Para, so that the season instead of practically closing in March will be prolonged to the end of April or, perhaps, into May, and the supply of rubber bills be spread over a longer period."

**Balata.**

S. FIGGIS & Co. (London) report in their annual review for 1906: Balata was in much reduced supply. Consequently the price gradually advanced, fine sheet closing at 2s. 2½d. @ 2s. 3d. Block at 1s. 8d. @ 1s. 8½d.

**NEW YORK PRICES FOR BALATA, 1906.**

Reported by Raw Products Co., New York.

	Block.	Sheet.		Block.	Sheet.
January .....	40=42	63=65	July .....	43=45	65=68
February .....	40=42	63=65	August .....	44=45	64=67
March .....	42=44	64=67	September .....	45=46	64=67
April .....	42=44	64=67	October .....	44=45	43=67
May .....	43=44	65=67	November .....	43=45	61=66
June .....	43=45	65=68	December .....	43=45	60=66

At the London rubber auction of March 1, 45 packages offered and 15 sold. Block, part fair, part brittle, 1s. 8¼d. [= 41 cents]; sheet, 2s. 5¼d. [= 59¼ cents].

**IMPORTS FROM PARA AT NEW YORK.**

[The Figures Indicate Weight in Pounds.]

FEBRUARY 25.—By the steamer <i>Cameteuse</i> , from Manaus and Para:		IMPORTERS.			Fine. Medium. Coarse.		Caucho.		Total.
A. T. Morse & Co.....	414,600	70,000	101,300	37,100=	623,000				
New York Commercial Co.....	163,300	62,700	56,400	25,100=	307,500				
General Rubber Co.....	139,700	30,600	118,400	7,500=	296,200				
Foel & Arnold.....	152,500	56,700	74,600	5,200=	289,000				
C. P. dos Santos.....	25,700	2,500	23,700	16,800=	68,700				
Neale & Co.....	22,500	2,900	27,300	.....=	52,700				
Ed. Reeks & Co.....	21,000	4,600	10,600	.....=	36,200				
Hagemeyer & Brunn.....	28,900	.....	21,800	.....=	50,700				
Total .....	968,200	230,000	434,100	91,700=	1,724,000				
MARCH 5.—By the steamer <i>Boniface</i> , from Manaus and Para:		IMPORTERS.			Fine. Medium. Coarse.		Caucho.		Total.
A. T. Morse & Co.....	314,500	89,100	170,200	154,000=	727,800				

**Rubber Scrap Prices.**

NEW YORK quotations—prices paid by consumers for carload lots—per pound—are lower than one month ago:

Old Rubber Boots and Shoes—Domestic.....	11 @ 11¼
Old Rubber Boots and Shoes—Foreign.....	9½ @ 9¾
Pneumatic Bicycle Tires.....	7½ @ 7¾
Automobile Tires.....	9¾ @ 10
Solid Rubber Wagon and Carriage Tires.....	10 @ 10½
White Trimmed Rubber.....	12½ @ 12¾
Heavy Black Rubber.....	5¾ @ 6
Air Brake Hose.....	4¾ @ 5
Fire and Large Hose.....	3¾ @ 3¾
Garden Hose.....	2½ @ 2¾
Matting .....	1½ @ 1¾

New York Commercial Co.....	208,600	43,400	81,100	61,900=	395,000
Poel & Arnold.....	145,300	22,100	33,500	54,900=	255,800
General Rubber Co.....	36,000	12,400	69,500	26,600=	144,500
Neale & Co.....	13,600	2,900	18,400	5,100=	40,000
Ed. Reeks & Co.....	14,000	2,100	20,500	.....	36,600
C. P. dos Santos.....	.....	.....	30,000=	30,000	.....
Hagemeyer & Brunn.....	10,700	.....	9,900	.....	20,600
Total.....	742,700	172,000	403,100	332,500=	1,650,300

MARCH 14.—By the steamer *Cearense*, from Manaus and Para:

Poel & Arnold.....	210,900	112,800	83,200	48,300=	455,200
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A. T. Morse & Co.....	167,900	54,000	131,800	7,700=	361,400
New York Commercial Co.....	92,400	14,000	33,900	70,100=	210,400
General Rubber Co.....	56,000	9,200	76,200	6,700=	148,100
C. P. dos Santos.....	47,000	11,900	25,100	.....	84,000
Neale & Co.....	9,600	2,500	27,000	.....	39,100
Ed. Reeks & Co.....	12,500	2,500	18,500	.....	34,000
Hagemeyer & Brunn.....	12,100	.....	12,500	.....	24,600
L. Johnson & Co.....	14,900	.....	2,600	4,000=	21,500
Carnikau, McDougal Co.....	8,800	.....	.....	.....	8,800
G. Amsinck & Co.....	300	.....	1,700	.....	2,000

Total..... 632,400 206,900 412,500 138,200= 1,390,000

#### PARA RUBBER VIA EUROPE.

	POUNDS.
FEB. 18.—By the <i>Ethel Frederick</i> =Mollendo:	
W. R. Grace & Co. (Caucho).....	7,000
FEB. 27.—By the <i>Samsland</i> =Antwerp:	
Poel & Arnold (Fine).....	27,000
FEB. 23.—By the <i>Georgic</i> =Liverpool:	
New York Commercial Co. (Fine).....	32,000
FEB. 28.—By the <i>Cevic</i> =Liverpool:	
Poel & Arnold (Fine).....	11,500
MAR. 4.—By the <i>Lucania</i> =Liverpool:	
General Rubber Co. (Coarse).....	35,000
MAR. 5.—By the <i>Gracia</i> =Mollendo:	
W. R. Grace & Co. (Fine).....	4,500
MAR. 7.—By the <i>Armenian</i> =Liverpool:	
New York Commercial Co. (Fine).....	23,000
MAR. 11.—By the <i>Colon</i> =Mollendo:	
New York Commercial Co. (Fine).....	3,500
MAR. 11.—By the <i>Carmania</i> =Liverpool:	
Poel & Arnold (Fine).....	13,500
Poel & Arnold (Coarse).....	28,000
MAR. 11.—By the <i>Pretoria</i> =Hamburg:	
Poel & Arnold (Fine).....	11,000
Poel & Arnold (Coarse).....	5,500
MAR. 18.—By the <i>Patricia</i> =Hamburg:	
General Rubber Co. (Coarse).....	7,500
Poel & Arnold (Fine).....	7,000
MAR. 20.—By the <i>Bovic</i> =Liverpool:	
New York Commercial Co. (Fine).....	33,500
MAR. 21.—By the <i>Oceanic</i> =Liverpool:	
General Rubber Co. (Fine).....	45,000
General Rubber Co. (Coarse).....	45,000

#### OTHER ARRIVALS AT NEW YORK.

##### CENTRALS.

FEB. 16.—By the <i>Vigilant</i> =Frontera:	
Harburger & Stack.....	9,000
H. Marquardt & Co.....	3,000
New York Commercial Co.....	2,500
FEB. 16.—By the <i>El Valle</i> =New Orleans:	
Manhattan Rubber Mfg. Co.....	15,000
A. N. Rotholz.....	2,000
E. B. Strout.....	1,500
Eggers & Heinlein.....	1,000
G. Amsinck & Co.....	1,000
FEB. 16.—By the <i>Maranhense</i> =Ceara:	
Emile Borel.....	20,000
FEB. 18.—By the <i>Ethel Frederick</i> =Colon:	
Hirzel Feltman Co.....	46,000
G. Amsinck & Co.....	2,000
American Trading Co.....	1,500
E. B. Strout.....	1,000
Suzarte & Whitney.....	1,000
FEB. 19.—By the <i>Yumuri</i> =Tampico:	
Continental-Mexican Rubber Co.....	115,000
Edward Maurer.....	40,000
FEB. 20.—By the <i>Advance</i> =Colon:	
L. Johnson & Co.....	4,000
Mann & Emdon.....	3,500
Kunhardt & Co.....	2,500
G. Amsinck & Co.....	2,000
I. Brandon & Bros.....	1,000
Graham, Hinkley & Co.....	500
FEB. 20.—By the <i>Raphael</i> =Bahia:	
New York Commercial Co.....	26,000
A. D. Hitch & Co.....	15,000
American Commercial Co.....	9,000
Poel & Arnold.....	9,000
A. Hirsch & Co.....	15,000
J. H. Rossbach & Bros.....	3,000
FEB. 21.—By the <i>Oceanic</i> =Liverpool:	
Robinson & Stiles.....	56,000
George A. Alden & Co.....	3,000
FEB. 23.—By the <i>Panama</i> =Colon:	
Hirzel, Feltman & Co.....	2,000
Demarest Bros. & Co.....	1,500
I. Brandon & Bros.....	1,000
FEB. 23.—By the <i>Merida</i> =Vera Cruz:	
H. Marquardt & Co.....	1,500

##### CENTRALS—Continued.

New York Commercial Co.....	1,000	2,500
FEB. 25.—By the <i>Comus</i> =New Orleans:		
Eggers & Heinlein.....	3,000	
Williams & Terhune.....	1,000	
G. Amsinck & Co.....	1,000	5,000
FEB. 27.—By the <i>Byron</i> =Bahia:		
New York Commercial Co.....	22,500	
American Commerce Co.....	5,000	
A. D. Hitch & Co.....	3,500	31,000
MAR. 1.—By the <i>La Plata</i> =Columbia:		
D. A. De Lima & Co.....	3,500	
Charles Ehrhardt.....	2,000	
A. Held.....	2,000	
Meyer & Hecht.....	1,500	
Wessels, Kulenkampff & Co.....	1,000	
Andreas & Co.....	1,000	
A. M. Capen's Sons.....	1,000	
Kunhardt & Co.....	1,000	
United Fruit Co.....	1,000	
Suzarte & Whitney.....	1,000	
I. Brandon & Bros.....	1,000	
Graham, Hinkley & Co.....	500	
Escobar & Gorgorza Co.....	500	17,000
MAR. 1.—By the <i>Alliance</i> =Colon:		
Mann & Emdon.....	5,000	
Piza Nephews Co.....	3,500	
Hirzel, Feltman & Co.....	3,000	
Andean Trading Co.....	1,500	13,000
MAR. 2.—By the <i>El Dorado</i> =New Orleans:		
A. T. Morse & Co.....	20,000	
A. N. Rotholz.....	4,500	
G. Amsinck & Co.....	3,000	
Eggers & Heinlein.....	2,000	29,500
MAR. 4.—By the <i>Washington</i> =Tampico:		
Continental-Mexican Rubber Co.....	130,000	
Edward Maurer.....	65,000	
New York Commercial Co.....	30,000	
Poel & Arnold.....	11,000	236,000
MAR. 4.—By the <i>Esperanza</i> =Frontera:		
Harburger & Stack.....	13,500	
E. Steiger & Co.....	4,000	
Meyer & Hecht.....	2,000	
American Trading Co.....	2,000	
H. Marquardt & Co.....	2,500	
New York Commercial Co.....	2,500	
Thebaud Brothers.....	2,500	
W. L. Wadleigh.....	1,500	
Graham, Hinkley & Co.....	1,000	32,500
MAR. 4.—By the <i>Lucania</i> =Liverpool:		
Robinson & Stiles.....	45,000	
MAR. 5.—By the <i>Gracia</i> =Colon:		
Hirzel, Feltman Co.....	5,000	
G. Amsinck & Co.....	3,000	
A. M. Capen's Sons.....	3,000	
Eggers & Heinlein.....	1,000	
A. S. Lascellas Co.....	500	13,000
MAR. 6.—By the <i>Cienfuegos</i> =Tampico:		
Continental-Mexican Rubber Co.....	22,000	
MAR. 6.—By the <i>Finance</i> =Colon:		
G. Amsinck & Co.....	4,000	
E. B. Strout.....	4,000	
Aramburo Co.....	2,000	
Charles E. Griffin.....	1,500	
Hirzel, Feltman Co.....	1,500	
Demarest Bros. Co.....	1,500	
D. A. De Lima Co.....	1,500	
I. Brandon & Bros.....	1,500	
Roldan & Van Sickle.....	1,000	
A. Santos & Co.....	1,000	
L. Johnson & Co.....	1,000	
Mecker & Co.....	1,000	23,000
MAR. 7.—By the <i>El Valle</i> =New Orleans:		
A. T. Morse & Co.....	6,000	
Manhattan Rubber Mfg. Co.....	3,000	
Graham, Hinkley Co.....	1,000	10,000
MAR. 7.—By the <i>Sarnia</i> =Columbia:		
G. Amsinck & Co.....	5,000	
Kunhardt & Co.....	3,500	
Schlute & Geeshen.....	3,000	
Leanz & Co.....	2,000	
I. Brandon & Bros.....	2,000	
American Trading Co.....	1,000	16,500
MAR. 9.—By the <i>Mexico</i> =Frontera:		
Harburger & Stack.....	13,500	
American Trading Co.....	5,000	
E. Steiger & Co.....	2,000	

##### CENTRALS—Continued.

New York Commercial Co.....	2,500	
H. Marquardt & Co.....	1,500	
Graham, Hinkley Co.....	1,000	25,500
MAR. 11.—By the <i>Colon</i> =Colon:		
Hirzel, Feltman Co.....	5,000	
G. Amsinck & Co.....	1,500	6,500
MAR. 11.—By the <i>Carmania</i> =Liverpool:		
Poel & Arnold.....	34,000	
MAR. 11.—By the <i>Pretoria</i> =Hamburg:		
Poel & Arnold.....	9,000	
George A. Alden & Co.....	3,500	12,500
MAR. 13.—By the <i>Altai</i> =Colon:		
G. Amsinck & Co.....	3,500	
A. M. Capen's Sons.....	2,000	
I. Brandon & Bros.....	1,000	
Bartling & De Leon.....	1,000	
Mecke & Co.....	1,000	8,500
MAR. 13.—By the <i>Matanzas</i> =Tampico:		
Edward Maurer.....	80,000	
Continental-Mexican Co.....	50,000	
New York Commercial Co.....	22,000	
Poel & Arnold.....	4,000	
Harburger & Stack.....	1,000	157,000
MAR. 14.—By the <i>Donnota</i> =Bahia:		
New York Commercial Co.....	13,000	
MAR. 14.—By the <i>Cearense</i> =Ceara:		
Emile Borel.....	35,000	
MAR. 14.—By the <i>Tagus</i> =Greystown:		
E. B. Strout.....	7,000	
G. Amsinck & Co.....	5,000	
Andreas & Co.....	2,000	
Meyer & Hecht.....	2,000	
De Lima & Cortessa.....	1,500	
Jose Julia & Co.....	1,000	18,500
MAR. 15.—By the <i>Majestic</i> =Liverpool:		
George A. Alden & Co.....	25,000	
MAR. 16.—By the <i>Monterey</i> =Frontera:		
Harburger & Stack.....	7,000	
E. Steiger & Co.....	2,500	
W. L. Wadleigh.....	2,500	
New York Commercial Co.....	2,500	
H. Marquardt Co.....	1,500	16,000
MAR. 16.—By the <i>Advance</i> =Colon:		
Demarest Bros. Co.....	5,500	
Roldan & Van Sickle.....	5,000	
Hirzel, Feltman Co.....	5,000	
G. Amsinck & Co.....	3,500	
Mann & Emdon.....	2,500	
A. Santos & Co.....	2,000	
I. Brandon & Bros.....	1,000	24,500
MAR. 18.—By the <i>Terence</i> =Bahia:		
A. Hirsch & Co.....	15,000	
A. D. Hitch & Co.....	11,000	
New York Commercial Co.....	8,000	
Poel & Arnold.....	9,000	
J. H. Rossbach & Bros.....	2,000	45,000
MAR. 18.—By the <i>El Rio</i> =Galveston:		
Continental-Mexican Rubber Co.....	30,000	
MAR. 18.—By the <i>Manzanillo</i> =Tampico:		
Continental-Mexican Rubber Co.....	30,000	
New York Commercial Co.....	23,000	53,000
MAR. 18.—By the <i>Minnehaha</i> =London:		
General Rubber Co.....	25,000	
MAR. 21.—By the <i>Sibiria</i> =Columbia:		
Seanz & Co.....	3,000	
G. Amsinck & Co.....	2,500	
Roldan & Van Sickle.....	2,500	
D. A. De Lima Co.....	2,500	
A. Held.....	1,000	
I. Brandon & Bros.....	1,000	
Kunhardt & Co.....	500	13,000
MAR. 21.—By the <i>Bovic</i> =Liverpool:		
Poel & Arnold.....	6,500	
MAR. 23.—By the <i>Merida</i> =Frontera:		
Harburger & Stack.....	7,000	
New York Commercial Co.....	2,500	
Graham, Hinkley & Co.....	1,000	
E. Steiger & Co.....	1,000	
H. Marquardt & Co.....	1,000	12,500

#### AFRICANS.

FEB. 16.—By the <i>Waldsee</i> =Hamburg:		
Poel & Arnold.....	22,000	
A. T. Morse & Co.....	10,000	32,000

## AFRICANS—Continued.

FEB. 18.—By the <i>Minnetonka</i> =London:	
General Rubber Co.....	9,000
FEB. 21.—By the <i>Noordam</i> =Rotterdam:	
Poel & Arnold.....	7,000
FEB. 21.—By the <i>Oceanic</i> =Liverpool:	
George A. Alden & Co.....	22,500
A. W. Brunn Co.....	11,500
Poel & Arnold.....	4,500
FEB. 21.—By the <i>Samsland</i> =Antwerp:	
Robinson & Stiles.....	22,500
Rubber Trading Co.....	13,500
A. W. Brunn Co.....	10,000
FEB. 23.—By the <i>Sigismund</i> =Hamburg:	
George A. Alden & Co.....	6,000
FEB. 23.—By the <i>Georgic</i> =Liverpool:	
General Rubber Co.....	170,000
Poel & Arnold.....	27,000
George A. Alden & Co.....	15,000
FEB. 26.—By the <i>Kaiserin Victoria</i> =Hamburg:	
George A. Alden & Co.....	38,000
A. T. Morse & Co.....	6,500
General Rubber Co.....	4,500
Rubber Trading Co.....	2,000
FEB. 26.—By the <i>Zeeland</i> =Antwerp:	
A. T. Morse & Co.....	15,000
Poel & Arnold.....	11,000
FEB. 26.—By the <i>Batavia</i> =Hamburg:	
Poel & Arnold.....	11,500
George A. Alden & Co.....	8,000
W. L. Gough & Co.....	6,000
A. T. Morse & Co.....	8,500
FEB. 27.—By the <i>Hudson</i> =Havre:	
Poel & Arnold.....	35,000
Rubber Trading Co.....	8,000
Robinson & Stiles.....	5,000
George A. Alden & Co.....	3,500
FEB. 28.—By the <i>Ceric</i> =Liverpool:	
George A. Alden & Co.....	25,000
MAR. 1.—By the <i>Andromeda</i> =Lisbon:	
General Rubber Co.....	80,000
George A. Alden & Co.....	22,000
MAR. 1.—By the <i>Teutonic</i> =Liverpool:	
A. T. Morse & Co.....	11,500
George A. Alden & Co.....	6,500
MAR. 4.—By the <i>Prince Irene</i> =Genoa:	
A. T. Morse & Co.....	9,000
MAR. 4.—By the <i>Lucania</i> =Liverpool:	
General Rubber Co.....	56,000
MAR. 5.—By the <i>Bretagne</i> =Havre:	
A. T. Morse & Co.....	13,500
MAR. 5.—By the <i>Minneapolis</i> =London:	
General Rubber Co.....	35,000
W. L. Gough & Co.....	3,500
MAR. 6.—By the <i>Potdam</i> =Rotterdam:	
Poel & Arnold.....	25,000
MAR. 7.—By the <i>Armenian</i> =Liverpool:	
General Rubber Co.....	100,000
A. T. Morse & Co.....	15,000
Livesey & Co.....	15,000
Raw Products Co.....	5,000
MAR. 11.—By the <i>Savoie</i> =Havre:	
A. T. Morse & Co.....	11,500
MAR. 11.—By the <i>Carmania</i> =Liverpool:	
Poel & Arnold.....	37,000
General Rubber Co.....	22,500
A. T. Morse & Co.....	15,000
MAR. 11.—By the <i>New York</i> =London:	
General Rubber Co.....	80,000
MAR. 11.—By the <i>Pretoria</i> =Hamburg:	
A. T. Morse & Co.....	35,000
General Rubber Co.....	15,000
Poel & Arnold.....	10,000
W. L. Pough & Co.....	3,500
MAR. 15.—By the <i>Vaderland</i> =Antwerp:	
General Rubber Co.....	90,000
A. T. Morse & Co.....	65,000
Poel & Arnold.....	33,000
George A. Alden & Co.....	11,500
Joseph Cantor.....	7,000
Rubber Trading Co.....	9,000
Raw Products Co.....	10,000
MAR. 15.—By the <i>Majestic</i> =Liverpool:	
George A. Alden & Co.....	22,500
MAR. 18.—By the <i>Touaine</i> =Havre:	
A. T. Morse & Co.....	22,500
MAR. 18.—By the <i>Victorian</i> =Liverpool:	
A. T. Morse & Co.....	22,500
MAR. 18.—By the <i>Patricia</i> =Hamburg:	
George A. Alden & Co.....	17,000

## AFRICANS—Continued.

General Rubber Co.....	11,500
Rubber Trading Co.....	3,500
W. L. Gough & Co.....	2,500
MAR. 18.—By the <i>Arcturus</i> =Lisbon:	
General Rubber Co.....	45,000
MAR. 19.—By the <i>Finland</i> =Antwerp:	
George A. Alden & Co.....	45,000
MAR. 20.—By the <i>Bovic</i> =Liverpool:	
Poel & Arnold.....	33,500
A. T. Morse & Co.....	18,000
MAR. 21.—By the <i>Koenig Luise</i> =Naples:	
A. T. Morse & Co.....	11,500
MAR. 21.—By the <i>California</i> =Havre:	
Poel & Arnold.....	110,000
Rubber Trading Co.....	7,000
MAR. 21.—By the <i>Oceanic</i> =Liverpool:	
George A. Alden & Co.....	15,000
A. T. Morse & Co.....	15,000
Livesey & Co.....	11,000
A. W. Brunn Co.....	7,000
MAR. 23.—By the <i>Pennsylvania</i> =Hamburg:	
Poel & Arnold.....	35,000
George A. Alden & Co.....	22,500
EAST INDIAN.	
FEB. 18.—By the <i>Minnetonka</i> =London:	
General Rubber Co.....	9,000
General Rubber Co.....	15,000
FEB. 23.—By the <i>Oceanic</i> =Colombo:	
A. T. Morse & Co.....	5,000
George A. Alden & Co.....	2,000
MAR. 4.—By the <i>Verona</i> =Singapore:	
A. T. Morse & Co.....	11,000
W. L. Gough & Co.....	15,000
Poel & Arnold.....	20,000
Joseph Cantor.....	11,000
MAR. 6.—By the <i>Vandalia</i> =Singapore:	
Haebler & Co.....	33,000
A. T. Morse & Co.....	20,000
George A. Alden & Co.....	20,000
Winter & Smillie.....	10,000
Poel & Arnold.....	5,000
MAR. 11.—By the <i>Neidenfels</i> =Colombo:	
A. T. Morse & Co.....	* 10,000
Livesey & Co.....	* 1,000
MAR. 15.—By the <i>Vaderland</i> =Antwerp:	
Poel & Arnold.....	* 5,000
MAR. 20.—By the <i>Bovic</i> =Liverpool:	
Joseph Cantor.....	11,000
MAR. 18.—By the <i>Minnehaha</i> =London:	
General Rubber Co.....	* 27,000
George A. Alden & Co.....	* 14,000
A. T. Morse & Co.....	* 6,000
Robinson & Stiles.....	7,000
Poel & Arnold.....	* 3,000
* Signifies Plantation Grades (balance Assam, Borneo and Java).	
GUTTA-JULUTONG.	
FEB. 21.—By the <i>Noordam</i> =Rotterdam:	
George A. Alden & Co.....	170,000
MAR. 4.—By the <i>Verona</i> =Singapore:	
A. W. Brunn Co.....	250,000
George A. Alden & Co.....	225,000
D. A. Shaw & Co.....	55,000
L. Littlejohn & Co.....	55,000
Joseph Cantor.....	20,000
A. T. Morse & Co.....	11,000
MAR. 6.—By the <i>Vandalia</i> =Singapore:	
A. W. Brunn Co.....	85,000
George A. Alden & Co.....	125,000
H. Pauli & Co.....	30,000
General Rubber Co.....	45,000
GUTTA-PERCHA.	
FEB. 26.—By the <i>Batavia</i> =Hamburg:	
Robera Soltan Co.....	15,000
MAR. 5.—By the <i>Minneapolis</i> =London:	
Henry A. Gould Co.....	4,500
MAR. 11.—By the <i>Pretoria</i> =Hamburg:	
George A. Alden & Co.....	7,000
MAR. 22.—By the <i>Pennsylvania</i> =Hamburg:	
Robert Soltan Co.....	9,000
BALATA.	
FEB. 18.—By the <i>Maraval</i> =Ciudad Bolivar:	
Thebaud Brothers.....	30,000

## BALATA—Continued.

Frame & Co.....	9,000	39,000
FEB. 25.—By the <i>Prins Willem</i> =Surinam:		
C. Amsinck & Co.....	1,500	
Middleton & Co.....	1,500	3,000
MAR. 5.—By the <i>Rhoda</i> =San Blas:		
Bartling & DeLeon.....		11,000
MAR. 11.—By the <i>Pretoria</i> =Hamburg:		
Robinson & Stiles.....		10,000
MAR. 12.—By the <i>Philadelphie</i> =Curacao:		
G. Amsinck & Co.....	1,500	
Graham, Hinkley & Co.....	1,000	2,500
MAR. 15.—By the <i>Maracas</i> =Ciudad Bolivar:		
Thebaud Brothers.....	5,500	
Frame & Co.....	1,500	7,000
MAR. 18.—By the <i>Korona</i> =Demerara:		
A. T. Morse & Co.....	2,500	
Frame & Co.....	1,500	4,000
MAR. 23.—By the <i>Prins Maurits</i> =Curacao:		
D. A. DeLima & Co.....	2,500	
Graham, Hinkley & Co.....	1,000	3,500

## CUSTOM HOUSE STATISTICS.

## PORT OF NEW YORK—FEBRUARY.

Imports:	Pounds.	Value.
India-rubber.....	8,259,373	\$6,617,994
Gutta-percha.....	62,021	18,583
Gutta-jelutong (Pontianak).....	1,041,710	47,405
Total.....	9,363,104	\$6,683,984
Exports:		
India-rubber.....	98,966	\$94,620
Reclaimed rubber.....	90,054	10,178
Rubber Scrap Imported.....	1,837,625	\$158,520
Rubber Scrap Exported.....	2,974	1,600

## BOSTON ARRIVALS.

	POUNDS.
JAN. 2.—By the <i>Armenia</i> =Hamburg:	
Poel & Arnold—African.....	52,085
JAN. 10.—By the <i>Sachem</i> =Liverpool:	
Poel & Arnold—Central.....	17,255
JAN. 11.—By the <i>Menominee</i> =Antwerp:	
W. L. Gough & Co.—African....	4,621
JAN. 14.—By the <i>Cymric</i> =Liverpool:	
Poel & Arnold—Central.....	59,238
JAN. 18.—By the <i>Kennebec</i> =Singapore:	
Poel & Arnold—Ceylon.....	323
JAN. 19.—By the <i>Canadian</i> =Liverpool:	
George A. Alden & Co.—African....	8,323
JAN. 21.—By the <i>Bethania</i> =Hamburg:	
George A. Alden & Co.—African....	11,193
A. T. Morse & Co.—African....	11,817
JAN. 28.—By the <i>Sylvania</i> =Liverpool:	
George A. Alden & Co.—African....	31,036
JAN. 30.—By the <i>Devonian</i> =Liverpool:	
George A. Alden & Co.—African....	2,846
JAN. 30.—By the <i>Rapallo</i> =Hamburg:	
W. L. Gough & Co.—African....	2,487
George A. Alden & Co.—African....	13,731
Total.....	214,955
[Value, \$141,163.]	
FEB. 6.—By the <i>Michigan</i> =Liverpool:	
Poel & Arnold—Central.....	40,268
FEB. 9.—By the <i>Ghazee</i> =Singapore:	
George A. Alden & Co.—East Indian	1,114
FEB. 13.—By the <i>Badenia</i> =Hamburg:	
W. L. Gough & Co.—African....	1,831
FEB. 14.—By the <i>Sachem</i> =Liverpool:	
George A. Alden & Co.—African....	19,666
FEB. 23.—By the <i>Canadian</i> =Liverpool:	
George A. Alden & Co.—African....	11,703
FEB. 27.—By the <i>Sagamore</i> =Liverpool:	
George A. Alden & Co.—African....	15,693
Total.....	90,275
[Value, \$67,679.]	
GUTTA-PERCHA.	
FEB. 8.—By the <i>Ghazee</i> =Singapore:	
George A. Alden & Co.....	1,100
FEB. 14.—By the <i>Sachem</i> =Liverpool:	
Poel & Arnold.....	11,275





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**Liverpool.**

WILLIAM WRIGHT &amp; Co. report [March 1]:

*Fine Pará.*—The market on spot has been dull, and prices have declined 1½d. per pound. There has been more disposition to sell forward, in anticipation of the expected, but still delayed, heavy receipts. The receipts this month will be considerably short of the estimate, but it is hoped that next month the shortage will be made up. America still continues an active buyer, and it will largely depend on her future actions whether prices will or will not decline. At the close prices look like going lower, but not to any considerable extent. Manufacturers must not put too much faith in a decided decline in values on the arrival of the expected heavy supplies; the contrary, in the past, has often proved to be the case.

EDMUND SCHLUTER &amp; Co. report [February 28]:

The market during February has been quietly steady for Pará grades, with the exception of cauchó ball, which declined owing to more ample arrivals, actual and prospective. Inasmuch as the information from Brazil points to full receipts in March-May, the market remains dull and of somewhat uncertain tendency. In spite of the actual shortage of receipts,

there is at present a large supply of rubber on the way to Europe, of which a fair proportion is unsold. On the other hand manufacturers admittedly keep exceedingly small reserve stocks, and are buying every day for their immediate wants.

## WORLD'S VISIBLE SUPPLY OF PARA, FEBRUARY 28.

	1907.	1906.	1905.	1904.	1903.
Tons .....	4160	5047	3692	3599	4701
Prices, hard fine.....	5/1½	5/4½	5/5	4/6	3/9

## LIVERPOOL STOCKS OF AFRICAN RUBBER, FEBRUARY 28.

	1907.	1906.	1905.	1904.	1903.
1907.....	301	1904.....	346	1901.....	779
1906.....	298	1903.....	355	1900.....	595
1905.....	338	1902.....	536	1899.....	441

Messrs. JOSEPH FYNNEY & Co., india-rubber merchants and importers, of Liverpool, were inadvertently mentioned in our last issue in connection with a wrong address. They are located in Harley buildings, 11, Oldhall street.

**Antwerp Prices Lower.**

THE offerings at the inscription of March 21 embraced about 270 tons, principally Congo sorts. The exceptions were 6 tons of Java and Borneo sorts and 3¼ tons Java and Straits plantation rubber. Some principal lots, with the estimates (in francs per kilo) were:

47,770 kilos	Upper Congo, ordinary.....	10.83-11.90
48,885 "	Kasai, red .....	10.00-11.75
55,746 "	Aruwimi .....	8.60-12.50
4,115 "	Lake Leopold I.....	- 8.75
17,827 "	Lake Leopold II.....	9.75-12.80
20,879 "	Mongalla .....	9.50-12.50

The bulk of the offerings was sold, at a reported decline of 10 centimes per kilogram, or about ¾ of 1 cent per pound.

## OFFICIAL STATISTICS OF RUBBER (IN POUNDS).

## UNITED STATES.

MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.
January, 1907 .....	6,473,039	292,892	6,180,147
January, 1906 .....	6,458,513	408,846	6,049,667
January, 1905 .....	7,418,006	214,294	7,203,712
January, 1904 .....	4,982,409	235,498	4,746,911
January, 1903 .....	5,881,341	191,006	5,690,335

## GERMANY.

MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.
January, 1907 .....	2,930,620	1,419,880	1,510,740
January, 1906 .....	4,221,140	1,218,580	3,002,560
January, 1905 .....	3,427,820	1,242,120	2,185,700
January, 1904 .....	2,832,500	696,300	2,136,200
January, 1903 .....	3,012,020	1,161,360	1,850,660

## FRANCE.\*

MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.
January, 1907 .....	1,583,560	1,049,840	533,720
January, 1906 .....	2,488,640	1,249,380	1,239,260
January, 1905 .....	2,220,020	531,300	1,688,720
January, 1904 .....	805,860	728,860	77,000
January, 1903 .....	1,021,020	873,400	147,620

## BELGIUM.†

MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.
January, 1907 .....	1,259,335	904,725	354,610
January, 1906 .....	2,048,757	651,649	1,397,108
January, 1905 .....	1,346,376	560,859	785,517
January, 1904 .....	1,379,356	895,228	484,128
January, 1903 .....	1,252,405	275,112	977,293

## GREAT BRITAIN.

MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.
January, 1907 .....	5,867,568	3,401,328	2,466,240
January, 1906 .....	4,221,168	3,368,512	852,656
January, 1905 .....	5,160,176	3,107,552	2,052,624
January, 1904 .....	4,628,064	3,225,046	1,403,018
January, 1903 .....	5,278,784	4,229,344	1,049,440

\*General Commerce. †Special Commerce.

## Le Caoutchouc & La Gutta-Percha

49, Rue des Vinaigriers, PARIS (10e), FRANCE,  
New York Office: No. 874 BROADWAY.

Representative---CH. DIEN

The only Journal in the French language dealing with India Rubber and Gutta-percha and the industries connected therewith, including Asbestos, Celluloid, and Insulating Materials. Published on the 15th of each month.

**ANNUAL SUBSCRIPTION: 26 FRANCS.**

An unexcelled advertising medium for firms wishing to introduce their products into France and the French colonies.

Specimen copies free. Tariff of advertisements on demand.

*Mention The India Rubber World when you write.*

## Special Notice TO THE Rubber Planting World

**PARA, CASTILLOA, CEARA, ETC.**

Seeds and stumps forwarded to all parts of the World. Orders being booked from Planters, Merchants, Govt. Botanical and Agricultural Departments, Officials, Consuls, Missionaries, Lawyers, etc., from all parts of the Globe.

The Chief of a Botanical and Scientific Department who bought a large quantity of Para and Castilloa seed from last two crops, writes, 19th November, 1906: "We may however want a large quantity of seeds next year, both of Castilloa and Para. I shall be obliged if you will quote me your lowest possible price for both Para and Castilloa in quantities of 250,000, 500,000, 750,000 and 1,000,000."

The Director of a Govt. Experiment Station, Honolulu, writes, December 13th, 1906: "Yours of October 15th at hand; the 22 packages Castilloa Elastica seed came about three weeks ago, and are of good quality, nearly all having germinated."

Special offer of seeds and stumps, with circulars, on view at the office of this paper and post free on application.

Seeds of celebrated Caravonica and Spence Cotton. For green manuring. *Crotalaria Striata*, Vigna, Groundnuts, etc. Price on application.

See further particulars in our advertisement in this paper, page 41.

Telegraphic Address: J. P. WILLIAM & BROS.,

William, Henaratgoda, Ceylon. Tropical Seed Merchants,

Liber's, A.I. and A.B.C. Codes used. Henaratgoda, Ceylon.

Also private codes.

*Mention The India Rubber World when you write.*

## SYRINGE BOXES

**OF WHITE WOOD, BASS, OAK, ASH, Etc.**

**FINE WORK. LOW PRICES. PROMPT SHIPMENT.**

*Estimates and Samples Furnished on Application.*

ALSO ANY OTHER KIND OF

**FANCY WOOD BOXES MADE TO ORDER**

*Extensive Facilities enable us to Guarantee Satisfaction.*

**HENRY H. SHEIP MFG. CO.**

6th St. and Columbia Ave., Philadelphia, Pa.

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THERE is not, in Canada, a more widely or favorably known trade mark than the DUNLOP two hands. It stands for push in business, for good rubber and the square deal.

CORRESPONDENCE SOLICITED REGARDING ANY MATTER TOUCHING THE DEVELOPMENT OF THE RUBBER TRADE IN CANADA . . . .

**The Dunlop Tire & Rubber Goods Co.**

(LIMITED)

**TORONTO, CANADA**

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**Bicycle, Carriage, Automobile.**

**NONE BETTER.**

**KOKOMO RUBBER CO.,**

**KOKOMO, IND.**

*Mention The India Rubber World when you write.*

## Furnish Us Your Address

if you are interested in the EUROPEAN India-rubber, Gutta-percha, Asbestos, and Celluloid industry, so as to enable us to send you free of charge a sample copy of the "Gummi-Zeitung", the leading organ of the Continental manufacturing interest; Address:

**GUMMI-ZEITUNG,**

**DRESDEN-A,**

**SAXONY, GERMANY.**

*Mention The India Rubber World when you write.*

**There is but One Best in Anything**

**In Rubber Substitute**

**Best is**

**ASHLEY'S**

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**IMPORTERS OF**

**CRUDE RUBBER**

L. BLITZ, Manager Tel. 3480 BROAD

**5 HANOVER STREET, NEW YORK**





## RUBBER BUYERS' DIRECTORY—Continued.

## Carriage Mats.—Continued.

B. F. Goodrich Co., Akron, O.  
Gutta Percha & Rubber Mfg. Co., N. Y.  
The Gutta Percha & Rubber Mfg. Co.,  
of Toronto, Ltd.  
Home Rubber Co., Trenton, N. J.  
National India Rubber Co., Bristol, R. I.  
N. J. Car Spring & Rubber Co., Jersey  
City, N. J.  
Peerless Rubber Mfg. Co., New York.  
Revere Rubber Co., Boston, Mass.  
Voorhees Rubber Mfg. Co., Jersey City.

## Cord (Pure Rubber).

Acme Rubber Mfg. Co., Trenton.  
Boston Belting Co., Boston-New York.  
Boston Woven Hose & Rubber Co.  
Cleveland Rubber Co., Cleveland, O.  
Davol Rubber Co., Providence, R. I.  
Electric Hose & Rubber Co., Wilming-  
ton, Del.  
Empire Rubber Mfg. Co., Trenton, N. J.  
B. F. Goodrich Co., Akron, O.  
Gutta Percha & Rubber Mfg. Co., N. Y.  
The Gutta Percha & Rubber Mfg. Co.,  
of Toronto, Ltd.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston-New York.  
Voorhees Rubber Mfg. Co., Jersey City.

## Deckle Straps.

Boston Belting Co., Boston.  
Canadian Rubber Co., of Montreal.  
B. F. Goodrich Co., Akron, O.  
Mechanical Rubber Co., Chicago.  
New York Belting & Packing Co., N. Y.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston-New York.

## Door Springs.

Hodgman Rubber Co., New York.

## Dredging Sleeves.

Acme Rubber Mfg. Co., Trenton.  
Boston Belting Co., Boston-New York.  
Boston Woven Hose & Rubber Co.  
Canadian Rubber Co., of Montreal.  
B. F. Goodrich Co., Akron, O.  
Gutta Percha & Rubber Mfg. Co., N. Y.  
The Gutta Percha & Rubber Mfg. Co.,  
of Toronto, Ltd.  
Home Rubber Co., Trenton, N. J.  
N. J. Car Spring & Rubber Co., Jersey  
City.  
New York Belting & Packing Co., N. Y.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston, Mass.

## Force Cups.

The Gutta Percha & Rubber Mfg. Co.,  
of Toronto, Ltd.  
Hodgman Rubber Co., New York.  
National India Rubber Co., Bristol, R. I.

## Fruit Jar Rings.

Acme Rubber Mfg. Co., Trenton.  
Boston Woven Hose & Rubber Co.  
Canadian Rubber Co., of Montreal.  
Cincinnati Rubber Mfg. Co., Cincinnati,  
Ohio.  
Cleveland Rubber Co., Cleveland, O.  
B. F. Goodrich Co., Akron, O.  
Empire Rubber Mfg. Co., Trenton, N. J.  
The Gutta Percha & Rubber Mfg. Co.,  
of Toronto, Ltd.  
Manhattan Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
New York Belting & Packing Co., N. Y.

## Fuller Balls.

B. F. Goodrich Co., Akron, O.  
Jenkins Bros., New York.  
National India Rubber Co., Bristol, R. I.  
N. J. Car Spring & Rubber Co., Jersey  
City.  
New York Belting & Packing Co., N. Y.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.

## Gage Glass Washers.

Boston Belting Co., Boston, Mass.  
Canadian Rubber Co., of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Electric Hose & Rubber Co., Wilming-  
ton, Del.  
Empire Rubber Mfg. Co., Trenton, N. J.  
B. F. Goodrich Co., Akron, O.  
The Gutta Percha & Rubber Mfg. Co.,  
of Toronto, Ltd.  
Home Rubber Co., Trenton, N. J.  
Jenkins Bros., New York.  
Manhattan Rubber Mfg. Co., New York.  
Mechanical Rubber Co., Chicago, Ill.  
National India Rubber Co., Bristol, R. I.  
N. J. Car Spring & Rubber Co., Jersey  
City, N. J.

## Gage Glass Washers.—Continued.

New York Belting & Packing Co., N. Y.  
New York Rubber Co., New York.  
Revere Rubber Co., Boston, Mass.  
Jos. Stokes Rubber Co., Trenton, N. J.  
Voorhees Rubber Mfg. Co., Jersey City,  
N. J.

## Gas-Bags (Rubber).

Canadian Rubber Co., of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Davol Rubber Co., Providence, R. I.  
B. F. Goodrich Co., Akron, O.  
The Gutta Percha & Rubber Mfg. Co.,  
of Toronto, Ltd.  
National India Rubber Co., Bristol, R. I.  
Peerless Rubber Mfg. Co., New York.  
Tyrer Rubber Co., Andover, Mass.  
Voorhees Rubber Mfg. Co., Jersey City.

## Gasket Tubing.

Canadian Rubber Co., of Montreal.  
B. F. Goodrich Co., Akron, O.  
The Gutta Percha & Rubber Mfg. Co.,  
of Toronto, Ltd.  
Jenkins Bros., New York.  
National India Rubber Co., Bristol, R. I.  
New Jersey Car Spring & Rubber Co.,  
Revere Rubber Co., Boston.

## "Gibraltar" Sheet Packing.

New Jersey Car Spring & Rubber Co.

## Grain Drill Tubes.

Cincinnati Rubber Mfg. Co., Cincinnati,  
Ohio.  
The Gutta Percha & Rubber Mfg. Co.,  
of Toronto, Ltd.

## Hat Bags.

Boston Belting Co., Boston.  
Canadian Rubber Co., of Montreal.  
B. F. Goodrich Co., Akron, O.  
Home Rubber Co., Trenton, N. J.  
Manhattan Rubber Mfg. Co., New York.  
Mattison Rubber Co., Chicago.  
Mechanical Rubber Co., Chicago.  
N. J. Car Spring & Rubber Co., Jersey  
City, N. J.

## New York Belting &amp; Packing Co., N. Y.

Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston.

## Horse Shoe Pads.

Canadian Rubber Co., of Montreal.  
Home Rubber Co., Trenton, N. J.  
Peerless Rubber Mfg. Co., New York.  
Plymouth Rubber Co., Stoughton, Mass.  
Revere Rubber Co., Boston-New York.  
Voorhees Rubber Mfg. Co., Jersey City.

## Hose—Armored.

## Hose—Wire Wound.

Acme Rubber Mfg. Co., Trenton.  
Boston Belting Co., Boston-New York.  
Boston Woven Hose & Rubber Co.  
Canadian Rubber Co., of Montreal.  
Electric Hose & Rubber Co., Wilming-  
ton, Del.  
B. F. Goodrich Co., Akron, O.  
Gutta Percha & Rubber Mfg. Co., N. Y.  
The Gutta Percha & Rubber Mfg. Co.,  
of Toronto, Ltd.  
National India Rubber Co., Bristol, R. I.  
N. J. Car Spring & Rubber Co., Jersey  
City.

New York Belting & Packing Co., N. Y.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston-New York.  
Voorhees Rubber Mfg. Co., Jersey City.

## Hose Core.

Alderfer Crute Co., Sharon Center, O.

## Hose Pipes, Nozzles, Couplings and Fittings.

Boston Woven Hose & Rubber Co.  
Canadian Rubber Co., of Montreal.  
Eureka Fire Hose Co., New York.  
Revere Rubber Co., Boston.  
A. Schrader's Son, Inc., New York.  
The Gutta Percha & Rubber Mfg. Co.,  
of Toronto, Ltd.

## Hose Linings.

Acme Rubber Mfg. Co., Trenton.  
Boston Belting Co., Boston-New York.  
Boston Woven Hose & Rubber Co.  
Empire Rubber Mfg. Co., Trenton, N. J.  
Eureka Rubber Mfg. Co., Trenton, N. J.  
B. F. Goodrich Co., Akron, O.  
The Gutta Percha & Rubber Mfg. Co.,  
of Toronto, Ltd.  
N. J. Car Spring & Rubber Co., Jersey  
City, N. J.  
Peerless Rubber Mfg. Co., New York.  
Revere Rubber Co., Boston.

## Hose—Protected.

Acme Rubber Mfg. Co., Trenton.  
Boston Belting Co., Boston-New York.  
Electric Hose & Rubber Co., Wilming-  
ton, Del.  
Gutta Percha & Rubber Mfg. Co., N. Y.  
The Gutta Percha & Rubber Mfg. Co.,  
of Toronto, Ltd.  
Revere Rubber Co., Boston-New York.  
Voorhees Rubber Mfg. Co., Jersey City.

## Hose Racks and Reels.

Gutta Percha & Rubber Mfg. Co., N. Y.  
The Gutta Percha & Rubber Mfg. Co.,  
of Toronto, Ltd.  
New York Belting & Packing Co., N. Y.  
Wirt & Knox Mfg. Co., Philadelphia.

## Hose—Rubber Lined.

## Cotton and Linen.

Acme Rubber Mfg. Co., Trenton.  
Boston Belting Co., Boston-New York.  
Boston Woven Hose & Rubber Co.  
Gutta Percha & Rubber Mfg. Co., N. Y.  
Canadian Rubber Co., of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Empire Rubber Mfg. Co., Trenton, N. J.  
Eureka Fire Hose Co., New York.  
Fabric Fire Hose Co., New York.  
B. F. Goodrich Co., Akron, O.  
Gutta Percha & Rubber Mfg. Co., N. Y.  
The Gutta Percha & Rubber Mfg. Co., of To-  
ronto.

Home Rubber Co., Trenton, N. J.  
Manhattan Rubber Mfg. Co., New York.  
N. J. Car Spring & Rubber Co., Jersey  
City, N. J.  
New York Belting & Packing Co., N. Y.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston.  
Jos. Stokes Rubber Co., Trenton, N. J.  
Voorhees Rubber Mfg. Co., Jersey City.

## Hose—Submarine.

Acme Rubber Mfg. Co., Trenton.  
Boston Belting Co., Boston-New York.  
Electric Hose & Rubber Co., Wilming-  
ton, Del.  
B. F. Goodrich Co., Akron, O.  
Gutta Percha & Rubber Mfg. Co., N. Y.  
The Gutta Percha & Rubber Mfg. Co.,  
of Toronto, Ltd.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston.  
A. Schrader's Son, Inc., New York.

## Hose Bands, Straps &amp; Menders.

Boston Woven Hose & Rubber Co.  
William Yerdon, Fort Plain, N. Y.

## "Jenkins '96" Packing.

Jenkins Bros., New York.

## Lawn-Hose Supporters.

C. J. Bailey & Co., Boston.

## Lawn Sprinklers.

W. D. Allen Mfg. Co., Chicago.  
Boston Woven Hose & Rubber Co.  
Canadian Rubber Co., of Montreal.

## Mallets (Rubber).

Boston Belting Co., Boston-New York.  
B. F. Goodrich Co., Akron, O.  
The Gutta Percha & Rubber Mfg. Co.,  
of Toronto, Ltd.  
National India Rubber Co., Bristol, R. I.  
New York Belting & Packing Co., N. Y.  
Peerless Rubber Mfg. Co., New York.  
Revere Rubber Co., Boston-New York.

## Mould Work.

(See Mechanical Rubber Goods.)

H. O. Canfield Co., Bridgeport, Ct.  
Davidson Rubber Co., Boston.  
Davol Rubber Co., Providence, R. I.  
Paulsen Rubber Co., Akron, O.  
The Gutta Percha & Rubber Mfg. Co.,  
of Toronto, Ltd.  
Hodgman Rubber Co., New York.  
La Crosse (Wis.) Rubber Mills Co.  
Laurel Rubber Co., Garfield, N. J.  
Massachusetts Chemical Co., Walpole,  
Mass.  
Mattison Rubber Works, Milford, Ill.  
Mitsel Rubber Co., Akron, O.  
Plymouth Rubber Co., Stoughton, Mass.  
Tyrer Rubber Co., Andover, Mass.  
Western Rubber Works, Goshen, Ind.

## "Nubian" Packing.

Voorhees Rubber Mfg. Co., Jersey City.

## Oil Well Supplies.

Boston Belting Co., Boston-New York.  
Boston Woven Hose & Rubber Co.  
B. F. Goodrich Co., Akron, O.  
Gutta Percha & Rubber Mfg. Co., N. Y.  
The Gutta Percha & Rubber Mfg. Co.,  
of Toronto, Ltd.  
Home Rubber Co., Trenton, N. J.  
Lake Shore Rubber Co., Erie, Pa.  
N. J. Car Spring & Rubber Co., Jersey  
City.  
New York Belting & Packing Co., N. Y.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston-New York.  
Voorhees Rubber Mfg. Co., Jersey City.

## Paper Machine Rollers.

Boston Belting Co., Boston-New York.  
B. F. Goodrich Co., Akron, O.  
Gutta Percha & Rubber Mfg. Co., N. Y.  
New York Belting & Packing Co., N. Y.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston-New York.  
Voorhees Rubber Mfg. Co., Jersey City.

## Plumbers' Supplies.

Canadian Rubber Co., of Montreal.  
H. O. Canfield Co., Bridgeport, Ct.  
B. F. Goodrich Co., Akron, O.  
The Gutta Percha & Rubber Mfg. Co.,  
of Toronto, Ltd.  
Republic Rubber Co., Youngstown, O.  
Western Rubber Works, Goshen, Ind.

## Pump Valves.

(See Mechanical Rubber Goods.)

The Gutta Percha & Rubber Mfg. Co.,  
of Toronto, Ltd.  
Jenkins Bros., New York.  
New York Belting & Packing Co., N. Y.  
Revere Rubber Co., Boston, Mass.  
Western Rubber Works, Goshen, Ind.

## Recording Thermometers.

Bristol Co., New York.

## Rollers—Rubber Covered.

Boston Belting Co., Boston.  
Canadian Rubber Co., of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Empire Rubber Mfg. Co., Trenton, N. J.  
B. F. Goodrich Co., Akron, O.  
Gutta Percha & Rubber Mfg. Co., N. Y.  
The Gutta Percha & Rubber Mfg. Co.,  
of Toronto, Ltd.  
Home Rubber Co., Trenton, N. J.  
Manhattan Rubber Mfg. Co., New York.  
Mechanical Rubber Co., Chicago.  
N. J. Car Spring & Rubber Co., Jersey  
City, N. J.  
New York Belting & Packing Co., N. Y.  
Peerless Rubber Mfg. Co., New York.  
Plymouth Rubber Co., Stoughton, Mass.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston-New York.

## Sewing Machine Rubbers.

B. F. Goodrich Co., Akron, O.

## Springs—Rubber.

Acme Rubber Mfg. Co., Trenton.  
Boston Belting Co., Boston-New York.  
Canadian Rubber Co., of Montreal.  
B. F. Goodrich Co., Akron, O.  
Gutta Percha & Rubber Mfg. Co., N. Y.  
The Gutta Percha & Rubber Mfg. Co.,  
of Toronto, Ltd.  
National India Rubber Co., Bristol, R. I.  
N. J. Car Spring & Rubber Co., Jersey  
City.  
New York Belting & Packing Co., N. Y.  
Peerless Rubber Mfg. Co., New York.  
Plymouth Rubber Co., Stoughton, Mass.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston-New York.  
Voorhees Rubber Mfg. Co., Jersey City.

## Stair Treads.

Acme Rubber Mfg. Co., Trenton.  
Boston Belting Co., Boston-New York.  
Boston Woven Hose & Rubber Co.  
Canadian Rubber Co., of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Empire Rubber Mfg. Co., Trenton, N. J.  
B. F. Goodrich Co., Akron, O.  
Gutta Percha & Rubber Mfg. Co., N. Y.  
The Gutta Percha & Rubber Mfg. Co.,  
of Toronto, Ltd.  
Home Rubber Co., Trenton, N. J.  
Manhattan Rubber Mfg. Co., New York.  
National India Rubber Co., Bristol, R. I.  
N. J. Car Spring & Rubber Co., Jersey  
City, N. J.  
New York Belting & Packing Co., N. Y.  
New York Rubber Co., New York.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston-New York.  
Voorhees Rubber Mfg. Co., Jersey City.

## RUBBER BUYERS' DIRECTORY—Continued.

**Thread.**

B. F. Goodrich Co., Akron, O.  
Mechanical Fabric Co., Providence, R. I.  
Revere Rubber Co., Boston.

**Tiling.**

Canadian Rubber Co., of Montreal, Ltd.  
B. F. Goodrich Co., Akron, O.  
Gutta Percha & Rubber Mfg. Co., N. Y.  
The Gutta Percha & Rubber Mfg. Co., of Toronto, Ltd.  
N. J. Car Spring & Rubber Co., Jersey City.  
New York Belting & Packing Co., N. Y.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Voorhees Rubber Mfg. Co., Jersey City.

**Tubing.**

(See Mechanical Rubber Goods.)  
American Hard Rubber Co., New York.  
Davidson Rubber Co., Boston.  
Daval Rubber Co., Providence, R. I.  
The Gutta Percha & Rubber Mfg. Co., of Toronto, Ltd.  
Laurel Rubber Co., Garfield, N. J.  
Plymouth Rubber Co., Stoughton, Mass.  
New Jersey Car Spring & Rubber Co., New York.  
New York Belting & Packing Co., N. Y.  
Tyer Rubber Co., Andover, Mass.

**Valve Balls.**

Boston Belting Co., Boston.  
Cleveland Rubber Co., Cleveland, O.  
B. F. Goodrich Co., Akron, O.  
Jenkins Bros., New York.  
Manhattan Rubber Mfg. Co., New York.  
Mechanical Rubber Co., Chicago.  
National India Rubber Co., Bristol, R. I.  
New York Belting & Packing Co., N. Y.  
New York Rubber Co., New York.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Revere Rubber Co., Boston.

**Valve Discs.**

American Hard Rubber Co., New York.  
Boston Belting Co., Boston-New York.  
B. F. Goodrich Co., Akron, O.  
Jenkins Bros., New York.  
New York Belting & Packing Co., N. Y.  
Peerless Rubber Mfg. Co., New York.  
Republic Rubber Co., Youngstown, O.  
Western Rubber Works, Goshen, Ind.

**Valves.**

(See Mechanical Rubber Goods.)  
The Gutta Percha & Rubber Mfg. Co., of Toronto, Ltd.  
Jenkins Bros., New York-Chicago.  
Milford Rubber Works Co., Milford, Ill.  
New Jersey Car Spring & Rubber Co., New York.  
New York Belting & Packing Co., N. Y.  
**Vulcanite Emery Wheels.**  
Manhattan Rubber Mfg. Co., Passaic, N. J.  
New York Belting & Packing Co., Ltd., New York.

**Wringer Rolls.**

Canadian Rubber Co., of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
B. F. Goodrich Co., Akron, O.  
The Gutta Percha & Rubber Mfg. Co., of Toronto, Ltd.  
Home Rubber Co., Trenton, N. J.  
New York Belting & Packing Co., N. Y.  
Republic Rubber Co., Youngstown, O.

**DRUGGISTS' AND STATIONERS' SUNDRIES.****Atomizers.****Bandages.****Bulbs.****Syringes.****Water Bottles.****Druggists' Sundries—General.**

American Hard Rubber Co., New York.  
C. J. Bailey & Co., Boston.  
Boston Woven Hose & Rubber Co.  
Canadian Rubber Co., of Montreal.  
Canton Rubber Co., Canton, O.  
Cleveland Rubber Co., Cleveland, O.  
Daval Rubber Co., Providence, R. I.  
Faultless Rubber Co., Akron, O.  
B. F. Goodrich Co., Akron, O.  
Hodgman Rubber Co., New York.  
Hygeia Nursing Bottle Co., Buffalo, N. Y.  
Imperial Rubber Mfg. Co., Beach City, O.  
Luzerne Rubber Co., Trenton, N. J.  
Mitsel Rubber Co., Akron, O.  
National India Rubber Co., Bristol, R. I.  
North British Rubber Co., Ltd., Edinburgh.  
Pirelli & Co., Milan, Italy.  
Seamless Rubber Co., New Haven, Ct.  
Tyer Rubber Co., Andover, Mass.

**Balls, Dolls and Toys.**

New York Rubber Co., New York.

**Combs.**

American Hard Rubber Co., New York.

**Elastic Bands.**

Canadian Rubber Co., of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Daval Rubber Co., Providence, R. I.  
B. F. Goodrich Co., Akron, O.  
Hodgman Rubber Co., New York-Boston.  
Tyer Rubber Co., Andover, Mass.

**Erasive Rubbers.**

B. F. Goodrich Co., Akron, O.  
Mattison Rubber Co., New York.

**Finger Cots.**

Baumann Rubber Co., New Haven, Ct.  
Cleveland Rubber Co., Cleveland, O.  
Faultless Rubber Mfg. Co., Akron, O.  
B. F. Goodrich Co., Akron, O.  
Imperial Rubber Mfg. Co., Beach City, O.  
The Rubber Products Co., Barborton, O.

**Gloves.**

Canadian Rubber Co., of Montreal.  
Daval Rubber Co., Providence, R. I.  
Faultless Rubber Co., Akron, O.  
B. F. Goodrich Co., Akron, O.  
Imperial Rubber Mfg. Co., Beach City, O.  
National India Rubber Co., Bristol, R. I.  
Rubber Products Co., Barborton, O.

**Hard Rubber Goods.**

American Hard Rubber Co., New York.  
Canadian Rubber Co., of Montreal.  
H. O. Canfield Co., Bridgeport, Ct.  
Daval Rubber Co., Providence, R. I.  
Household Rubber Co., Youngstown, O.  
Stokes Rubber Co., Joseph, Trenton, N. J.  
Tyer Rubber Co., Andover, Mass.

**Hospital Sheetings.**

Cleveland Rubber Co., Cleveland, O.  
Daval Rubber Co., Providence, R. I.  
B. F. Goodrich Co., Akron, O.  
Hodgman Rubber Co., New York.  
National India Rubber Co., Bristol, R. I.  
Plymouth Rubber Co., Stoughton, Mass.  
Tyer Rubber Co., Andover, Mass.

**Ice Bags and Ice Caps.**

Baumann Rubber Co., New Haven, Ct.  
Cleveland Rubber Co., Cleveland, O.  
Faultless Rubber Co., Akron, O.  
B. F. Goodrich Co., Akron, O.  
Imperial Rubber Mfg. Co., Beach City, O.  
National India Rubber Co., Bristol, R. I.  
The Rubber Products Co., Barborton, O.  
Tyer Rubber Co., Andover, Mass.

**Life Preservers.**

Hodgman Rubber Co., New York.  
National India Rubber Co., Bristol, R. I.

**Nipples.**

Canadian Rubber Co., of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Daval Rubber Co., Providence, R. I.  
Faultless Rubber Co., Akron, O.  
B. F. Goodrich Co., Akron, O.  
Hygeia Nursing Bottle Co., Buffalo, N. Y.  
Imperial Rubber Mfg. Co., Beach City, O.  
The Rubber Products Co., Barborton, O.  
Tyer Rubber Co., Andover, Mass.

**Shower Bath Sprinklers.**

A. Schrader's Son, Inc., New York.

**Sponges (Rubber).**

Geo. Borgfeldt & Co., New York.  
Faultless Rubber Co., Ashland, O.  
N. Tire Rubber Sponge Co., Chicago.

**Stationers' Sundries.**

American Hard Rubber Co., New York.  
Boston Woven Hose & Rubber Co.  
Canadian Rubber Co., of Montreal.  
Cincinnati Rubber Mfg. Co., Cincinnati, Ohio.  
Cleveland Rubber Co., Cleveland, O.  
Daval Rubber Co., Providence, R. I.  
B. F. Goodrich Co., Akron, O.  
Hodgman Rubber Co., New York-Boston.  
Seamless Rubber Co., New Haven, Ct.  
Tyer Rubber Co., Andover, Mass.

**Stopples (Rubber).**

Cleveland Rubber Co., Cleveland, O.  
Daval Rubber Co., Providence, R. I.  
Hodgman Rubber Co., New York.  
Manhattan Rubber Mfg. Co., New York.  
National India Rubber Co., Bristol, R. I.  
New York Belting & Packing Co., N. Y.  
A. Schrader's Sons, Inc., New York.  
Tyer Rubber Co., Andover, Mass.

**Throat Bags.**

Cleveland Rubber Co., Cleveland, O.  
Daval Rubber Co., Providence, R. I.  
B. F. Goodrich Co., Akron, O.  
National India Rubber Co., Bristol, R. I.  
Tyer Rubber Co., Andover, Mass.

**Tobacco Pouches.**

Canadian Rubber Co., of Montreal.  
Faultless Rubber Co., Akron, O.  
B. F. Goodrich Co., Akron, O.  
The Rubber Products Co., Barborton, O.  
Tyer Rubber Co., Andover, Mass.

**MACKINTOSHED AND SURFACE GOODS.****Air Goods (Rubber).**

Canadian Rubber Co., of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Daval Rubber Co., Providence, R. I.  
B. F. Goodrich Co., Akron, O.  
Hodgman Rubber Co., New York.  
New York Rubber Co., New York.  
National India Rubber Co., Providence.  
Tyer Rubber Co., Andover, Mass.

**Air Mattresses.**

Canadian Rubber Co., of Montreal.  
Mechanical Fabric Co., Providence, R. I.  
National India Rubber Co., Bristol, R. I.

**Barbers' Bibs.**

Cleveland Rubber Co., Cleveland, O.  
Daval Rubber Co., Providence, R. I.  
Tyer Rubber Co., Andover, Mass.

**Bathing Caps.**

Daval Rubber Co., Providence, R. I.  
B. F. Goodrich Co., Akron, O.

**Bellows Cloths.**

Boston Rubber Co., Boston.  
Cleveland Rubber Co., Cleveland, O.  
Hodgman Rubber Co., New York.  
La Crosse (Wis.) Rubber Mills Co.

**Calendering.**

La Crosse (Wis.) Rubber Mills Co.  
Plymouth Rubber Co., Stoughton, Mass.

**Carriage Ducks and Drills.**

Cleveland Rubber Co., Cleveland, O.  
Empire Rubber Mfg. Co., Trenton, N. J.  
Gutta Percha & Rubber Mfg. Co., Toronto.  
National India Rubber Co., Bristol, R. I.

**Clothing.**

Canadian Rubber Co., of Montreal.  
Cleveland Rubber Co., Cleveland, O.  
Granby Rubber Co., Granby, Quebec.  
Gutta Percha & Rubber Mfg. Co., of Toronto.  
Hodgman Rubber Co., New York.  
La Crosse (Wis.) Rubber Mills Co.  
National India Rubber Co., Bristol, R. I.  
North British Rubber Co., Ltd., Edinburgh.  
Pirelli & Co., Milan, Italy.

**Cravenette.**

Cravenette Co., Ltd.

**Diving Apparatus.**

A. Schrader's Son, Inc., New York.

**Diving Dresses.**

Hodgman Rubber Co., New York.

**Dress Shields.**

Mattison Rubber Co., New York.

**Horse Covers.**

Hodgman Rubber Co., New York.  
National India Rubber Co., Bristol, R. I.

**Leggings.**

Cleveland Rubber Co., Cleveland, O.  
Hodgman Rubber Co., New York.  
National India Rubber Co., Bristol, R. I.

**Mackintoshes.**

(See Clothing.)

**Proofing.**

Canadian Rubber Co., of Montreal.  
La Crosse (Wis.) Rubber Mills Co.  
Plymouth Rubber Co., Stoughton, Mass.

**Rain Coats.**

Cravenette Co., Ltd.

**Rubber Coated Cloths.**

Mechanical Fabric Co., Providence, R. I.

**RUBBER FOOTWEAR.****Boots and Shoes.**

American Rubber Co., Boston.  
Boston Rubber Shoe Co., Boston.  
Canadian Rubber Co., of Montreal.  
L. Candee & Co., New Haven, Ct.  
B. F. Goodrich Co., Akron, O.  
Granby Rubber Co., Granby, Quebec.  
Gutta Percha & Rubber Mfg. Co., of Toronto.  
Hool Rubber Co., Boston.  
Lycorning Rubber Co., Williamsport, Pa.  
Meyer Rubber Co., New York.  
Milford Rubber Works Co., Milford, Ill.  
National India Rubber Co., Boston.  
North British Rubber Co., Ltd., Edinburgh.  
United States Rubber Co., New York.  
Wales-Goodyear Rubber Co., Boston.  
Woonsocket Rubber Co., Providence.

**Heels and Soles.**

Boston Woven Hose & Rubber Co.  
Canadian Rubber Co., of Montreal.  
Continental Caoutchouc & Guttapercha Co., Hanover.  
The Gutta Percha & Rubber Mfg. Co., of Toronto, Ltd.  
Plymouth Rubber Co., Stoughton, Mass.  
Western Rubber Works, Goshen, Ind.

**Tennis Shoes.**

American Rubber Co., Boston.  
Boston Rubber Shoe Co., Boston.  
Granby Rubber Co., Granby, Quebec.  
The Gutta Percha & Rubber Mfg. Co., of Toronto, Ltd.  
La Crosse Rubber Mills Co., La Crosse, Wis.  
National India Rubber Co., Providence.  
United States Rubber Co., New York.

**Wading Pants.**

Canadian Rubber Co., of Montreal.  
Hodgman Rubber Co., New York.

**DENTAL AND STAMP RUBBER.****Dental Gum.**

American Hard Rubber Co., New York.  
Cleveland Rubber Co., Cleveland, O.  
Tyer Rubber Co., Andover, Mass.

**Rubber Dam.**

Cleveland Rubber Co., Cleveland, O.  
Daval Rubber Co., Providence, R. I.  
B. F. Goodrich Co., Akron, O.  
Hodgman Rubber Co., New York.  
Tyer Rubber Co., Andover, Mass.

**Stamp Gum.**

B. F. Goodrich Co., Akron, O.  
Mattison Rubber Co., New York.  
Mechanical Rubber Co., Chicago, Ill.  
N. J. Car Spring & Rubber Co., Jersey City, N. J.  
New York Belting & Packing Co., N. Y.

**ELECTRICAL.****Electrical Supplies.**

American Hard Rubber Co., New York.  
Lake Shore Rubber Co., Erie, Pa.  
Joseph Stokes Rubber Co., Trenton, N. J.  
Massachusetts Chemical Co., Boston.  
Tyer Rubber Co., Andover, Mass.

## RUBBER BUYERS' DIRECTORY—Continued.

## Friction Tape.

Boston Belting Co., Boston.  
 Boston Woven Hose & Rubber Co.  
 Canadian Rubber Co., of Montreal.  
 Cleveland Rubber Co., Cleveland, O.  
 B. F. Goodrich Rubber Co., Akron, O.  
 Home Rubber Co., Trenton, N. J.  
 Massachusetts Chemical Co., Boston.  
 Mechanical Rubber Co., Chicago.  
 National India Rubber Co., Bristol, R. I.  
 Revere Rubber Co., Boston-New York.

## Hard Rubber Goods.

American Hard Rubber Co., New York.  
 Canadian Rubber Co., of Montreal.  
 Joseph Stokes Rubber Co., Trenton, N. J.

## Insulating Compounds.

Canadian Rubber Co., of Montreal.  
 Gutta-Percha & Rubber Mfg. Co., Toronto.  
 Massachusetts Chemical Co., Boston.

## Insulated Wire and Cables.

National India Rubber Co., Providence.

## Splicing Compounds.

Home Rubber Co., Trenton, N. J.  
 Massachusetts Chemical Co., Walpole, Mass.

## SPORTING GOODS.

## Foot Balls.

Canadian Rubber Co., of Montreal.  
 Cleveland Rubber Co., Cleveland, O.  
 Faultless Rubber Co., Akron, O.  
 B. F. Goodrich Rubber Co., Akron, O.  
 Hodgman Rubber Co., New York.  
 National India Rubber Co., Bristol, R. I.

## Golf Balls.

Boston Belting Co., Boston.  
 Canadian Rubber Co., of Montreal.  
 Davidson Rubber Co., Boston.  
 B. F. Goodrich Rubber Co., Akron, O.  
 The Gutta Percha & Rubber Mfg. Co., of Toronto, Ltd.

## Sporting Goods.

Canadian Rubber Co., of Montreal.  
 Faultless Rubber Co., Akron, O.  
 B. F. Goodrich Rubber Co., Akron, O.  
 Hodgman Rubber Co., New York.  
 Tyer Rubber Co., Andover, Mass.

## Striking Bags.

Canadian Rubber Co., of Montreal.  
 Cleveland Rubber Co., Cleveland, O.  
 Faultless Rubber Co., Akron, O.  
 B. F. Goodrich Rubber Co., Akron, O.  
 Rubber Products Co., Barberton, O.

## Submarine Outfits.

Hodgman Rubber Co., New York.

## MISCELLANEOUS.

## Boiler Specialist.

H. W. Jones, New York.

## Cement (Rubber).

Boston Belting Co., Boston.  
 Canadian Rubber Co., of Montreal.  
 B. F. Goodrich Rubber Co., Akron, O.  
 Hadley Cement Co., Lynn, Mass.  
 Manhattan Rubber Mfg. Co., New York  
 N. J. Car Spring & Rubber Co., Jersey City, N. J.  
 New York Belting & Packing Co., N. Y.

## Chemical Analyses.

Durand Woodman, Ph.D., New York.  
 H. L. Terry, Manchester, England.

## Chemical and Mechanical Engineer.

Charles E. Farrington, Boston.

## Chemists.

Stephen P. Sharples, Boston, Mass.  
 Durand Woodman, Ph.D., New York.

## Engraver.

P. C. Smith, Boston, Mass.

## Rubber Journals.

Gummi-Zeitung, Dresden, Germany.

## Rubber Planting.

Ohio Rubber Culture Co., Canton, O.

## Rubber Tree Seeds.

J. P. William & Bros., Heneratgoda, Ceylon.

## MACHINERY AND SUPPLIES FOR RUBBER MILLS.

## RUBBER MACHINERY.

## Acid Tanks.

Birmingham Iron Foundry, Derby, Conn.

## Band Cutting Machines.

A. Adamson, Akron, O.  
 Alton Machine Co., New York.  
 Birmingham Iron Foundry, Derby, Conn.

## Belt Folding Machines.

Birmingham Iron Foundry, Derby, Conn.  
 Farrel Foundry & Mach. Co., Ansonia, Conn.

## Belt Slitters.

## Cloth Dryers.

## Gearing.

## Shafting.

## Wrapping Machines.

Alton Machine Co., New York.  
 Birmingham Iron Foundry, Derby, Conn.  
 Farrel Foundry & Mach. Co., Ansonia, Conn.

## Belt Stretchers.

Alton Machine Co., New York.  
 Birmingham Iron Foundry, Derby, Conn.  
 Farrel Foundry & Mach. Co., Ansonia, Conn.  
 Hoggson & Pettis Mfg. Co., New Haven.

## Boilers.

William R. Thropp, Trenton, N. J.  
 John E. Thropp & Sons Co., Trenton, N. J.

## Braiders.

New England Butt Co., Providence, R. I.  
 Textile Machine Works, Reading, Pa.

## Buckles.

The Weld Mfg. Co., Boston.

## Cabling Machinery.

Alton Machine Co., New York.

## Calenders.

Alton Machine Co., New York.  
 Birmingham Iron Foundry, Derby, Conn.  
 Farrel Foundry & Mach. Co., Ansonia, Conn.  
 Textile-Finishing Machinery Co., Providence, R. I.  
 Textile Machine Works, Reading, Pa.

## Castings.

A. Adamson, Akron, O.  
 Birmingham Iron Foundry, Derby, Conn.  
 Farrel Foundry & Mach. Co., Ansonia, Conn.

## Chucks (Lathes).

Hoggson & Pettis Mfg. Co., New Haven

## Churns.

American Tool & Machine Co., Boston.

## Clutches.

Farrel Foundry & Mach. Co., Ansonia, Conn.

## Crackers.

Alton Machine Co., New York.  
 Birmingham Iron Foundry, Derby, Conn.

## Devulcanizers.

Alton Machine Co., New York.  
 Biggs Boiler Works Co., Akron, O.  
 Birmingham Iron Foundry, Derby, Conn.  
 Edred W. Clark, Hartford, Conn.  
 William R. Thropp, Trenton, N. J.

## Dies.

John J. Adams, Worcester, Mass.  
 Barbour Bros., Trenton, N. J.  
 Brockton Die Co., Brockton, Mass.  
 Hoggson & Pettis Mfg. Co., New Haven.  
 Independent Die Co., Brockton, Mass.  
 Joseph E. Knox & Co., Lynn, Mass.

## Doubling Machines.

American Tool & Machine Co., Boston.

## Drying Apparatus.

American Process Co., New York.

## Drying Machines.

Alton Machine Co., New York.  
 Joseph P. Devine, Buffalo, N. Y.  
 Birmingham Iron Foundry, Derby, Conn.  
 Textile-Finishing Machinery Co., Providence, R. I.

## Embossing Calenders.

Textile-Finishing Machinery Co., Providence, R. I.

## Engines, Steam.

Alton Machine Co., New York.  
 William R. Thropp, Trenton, N. J.  
 John E. Thropp & Sons Co., Trenton, N. J.

## Engraving Rolls.

Hoggson & Pettis Mfg. Co., New Haven.

## Grinders and Mixers.

Alton Machine Co., New York.  
 Birmingham Iron Foundry, Derby, Conn.  
 Farrel Foundry & Mach. Co., Ansonia, Conn.  
 William R. Thropp, Trenton, N. J.

## Hangers.

Farrel Foundry & Mach. Co., Ansonia, Conn.

## Hose Machines.

A. Adamson, Akron, O.  
 Alton Machine Co., New York.  
 Birmingham Iron Foundry, Derby, Conn.  
 New England Butt Co., Providence, R. I.

## Hydraulic Accumulators.

Birmingham Iron Foundry, Derby, Conn.  
 Farrel Foundry & Mach. Co., Ansonia, Conn.

## Insulating Machinery.

Textile Machine Works, Reading, Pa.

## Iron Castings.

Alton Machine Co., New York.

## Lasts (Rubber Shoe).

Middlesex Last Co., Boston.

## Lathes—Hard Rubber.

A. Adamson, Akron, O.

## Lathes—Jar Ring.

A. Adamson, Akron, O.  
 Alton Machine Co., New York.  
 Birmingham Iron Foundry, Derby, Conn.  
 William R. Thropp, Trenton, N. J.

## Machinists' Tools.

Hoggson & Pettis Mfg. Co., New Haven

## Moulds.

A. Adamson, Akron, O.  
 Alton Machine Co., New York.  
 W. E. Arnold, Malden, Mass.  
 Barbour Bros., Trenton, N. J.  
 Birmingham Iron Foundry, Derby, Conn.  
 H. O. Canfield Co., Bridgeport, Conn.  
 Hoggson & Pettis Mfg. Co., New Haven.  
 Williams Foundry & Machine Co., Akron, Ohio.

## Pillow Blocks.

Farrel Foundry & Mach. Co., Ansonia, Conn.

## Presses (for Rubber Work).

A. Adamson, Akron, O.  
 Alton Machine Co., New York.  
 Bay State Machine Co., Erie, Pa.  
 Birmingham Iron Foundry, Derby, Conn.  
 Boomer & Boschert Press Co., Syracuse, N. Y.  
 Edred W. Clark, Hartford, Conn.  
 Farrel Foundry & Mach. Co., Ansonia, Conn.  
 William R. Thropp, Trenton, N. J.  
 Williams Foundry & Machine Co., Akron, Ohio.

## Pumps.

Alton Machine Co., New York.  
 Birmingham Iron Foundry, Derby, Conn.  
 Boomer & Boschert Press Co., Syracuse, N. Y.  
 Farrel Foundry & Mach. Co., Ansonia, Conn.

## Racks for Boot and Shoe Cars.

Hoggson & Pettis Mfg. Co., New Haven.

## Reducing Valves.

Mason Regulator Co., Boston.

## Rollers (Hand).

Hoggson & Pettis Mfg. Co., New Haven.

## Rubber Covering Machines.

Alton Machine Co., New York.

## Rubber Growers' Utensils.

New England Butt Co., Providence, R. I.

## Cement Cans and Tanks.

American Can Co., New York.

## Repairing Kit Boxes.

American Can Co., New York.

## Separators.

Turner, Vaughan & Taylor Co., Cuyahoga Falls, O.

## Separators for Reclaimed Rubber.

American Process Co., New York.

## Special Rubber Machinery.

Alton Machine Co., New York.

## Wellman Co., Medford, Mass.

## Spreaders.

Alton Machine Co., New York.

## Steam Traps and Specialties.

Jenkins Bros., New York.

## Mason Regulator Co., Boston.

## Osgood Sayen, Philadelphia, Pa.

## Steel Stamps.

Hoggson & Pettis Mfg. Co., New Haven.

## Stitchers (Hand).

Hoggson & Pettis Mfg. Co., New Haven.

## Strip Covering Machines.

## Strip Cutters.

Alton Machine Co., New York.

New England Butt Co., Providence, R. I.

## Tire Molds.

Bay State Machine Co., Erie, Pa.

Williams Foundry & Machine Co., Akron, Ohio.

## Tubing Machines.

A. Adamson, Akron, O.

Alton Machine Co., New York.

Bay State Machine Co., Erie, Pa.

Edred W. Clark, Hartford, Conn.

John Royle & Sons, Paterson, N. J.

Textile Machine Works, Reading, Pa.

Williams Foundry & Machine Co., Akron, Ohio.

## Vacuum Drying Chambers.

Alton Machine Co., New York.

Joseph P. Devine Co., Buffalo, N. Y.

## Varnishing Machines.

Birmingham Iron Foundry, Derby, Conn.

## Vulcanizers.

Alton Machine Co., New York.

Biggs Boiler Works Co., Akron, O.

Birmingham Iron Foundry, Derby, Conn.

Farrel Foundry & Mach. Co., Ansonia, N. J.

John E. Thropp's Sons Co., Trenton, N. J.

William R. Thropp, Trenton, N. J.

## Washers.

Alton Machine Co., New York.

Birmingham Iron Foundry, Derby, Conn.

Farrel Foundry & Mach. Co., Ansonia, Conn.

William R. Thropp, Trenton, N. J.

Turner, Vaughan & Taylor Co., Cuyahoga Falls, O.

## Wire Insulating Machines.

Alton Machine Co., New York.

New England Butt Co., Providence, R. I.

## Wire Rope Machinery.

Alton Machine Co., New York.

## SECOND-HAND MACHINERY.

Philip McGrory, Trenton, N. J.

M. Norton & Co., Charlestown, Mass.

## FACTORY SUPPLIES.

## Aluminum Flake.

Aluminum Flake Co., Akron, O.

## Antimony, Sulphurets of.

Golden.

Actien-Ges. Georg Egestorff's Salzwerte, Linden, Germany.

Atlas Chemical Co., Newtonville, Mass.

## Golden and Crimson.

Joseph Cantor, New York.

Geo. F. Lufbery, Jr., Elizabeth, N. J.

Wm. H. Scheel, New York.

Stamford (Conn.) Rubber Supply Co.

Typke & King, London, England.



**MACHINERY AND SUPPLIES FOR RUBBER MILLS—Continued.**

<b>Balata.</b> George A. Alden & Co., Boston. Raw Products Co., New York.  <b>Benzol.</b> Samuel Cabot, Boston.  <b>Black Hypo.</b> Joseph Cantor, New York. William H. Scheel, New York. Type & King, London, England.  <b>Carbon Bisulphide.</b> George W. Speaight, New York.  <b>Caustic Soda.</b> Acker Process Co., Niagara Falls, N. Y.  <b>Chemicals.</b> Acker Process Co., Niagara Falls, N. Y. George W. Speaight, New York. S. F. Wetherill Co., Philadelphia, Pa.  <b>Colors.</b> Joseph Cantor, New York. William H. Scheel, New York. Type & King, London, England. S. F. Wetherill Co., Philadelphia, Pa.  <b>Crude Rubber.</b> George A. Alden & Co., Boston. A. W. Brunn & Co., New York. Walter L. Gough & Co., New York. Hagermeyer & Brunn, New York. Adolph Hirsch & Co., New York. Livesey & Co., Ltd., New York. Raw Products Co., New York. Rubber Trading Co., New York-Boston.  <b>Dermatine.</b> The Dermatine Co., London.  <b>Ducks and Drills (Cotton).</b> J. H. Lane & Co., New York.	<b>Gilsonite.</b> William H. Scheel, New York.  <b>Graphite.</b> United States Graphite Co., Philadelphia.  <b>Graphite Grease.</b> Jos. Dixon Crucible Co., Jersey City.  <b>Guayule Rubber.</b> Continental Rubber Co. Ed. Maurer, New York.  <b>Gutta-Percha.</b> George A. Alden & Co., Boston. Raw Products Co., New York. Rubber Trading Co., New York-Boston.  <b>Hydro-Carbon Products.</b> Geo. A. Alden & Co., Boston. William H. Scheel, New York. Raven Mining Co., Chicago.  <b>Infusorial Earth.</b> Stamford (Conn.) Rubber Supply Co.  <b>Kapak.</b> Raven Mining Co., Chicago.  <b>Lampblack.</b> Samuel Cabot, Boston.  <b>Lead—Blue.</b> Lead—Sublimed White. Picher Lead Co., Chicago, Ill.  <b>Lithopone.</b> Gabriel & Schall, New York.  <b>Paris White and Whiting.</b> H. F. Taintor Mfg. Co., New York.  <b>Mineral Rubber.</b> Standard Asphalt & Rubber Co., Chicago.  <b>Reclaimed Rubber.</b> Aladdin Rubber Co., Akron, O. Alkali Rubber Co., Akron, O. F. H. Appleton & Son, Boston. Bloomingdale (N. J.) Soft Rubber Co.	<b>Reclaimed Rubber.—Continued.</b> H. H. Clapp Rubber Co., Boston, Mass. Danversport Rubber Co., Boston. Derby Rubber Co., Derby, Conn. Eastern Rubber Co., New York. John Lang, London. Manufactured Rubber Co. New Jersey Rubber Co., Lambertville, N. J. Pequanoe Rubber Co., Butler, N. J. Philadelphia Rubber Works, Philadelphia. Robinson & Stiles, New York. Stockton Rubber Co., Stockton, N. J. Jos. Stokes Rubber Co., Trenton, N. J. S. & L. Rubber Co., Chester, Pa. Trenton (N. J.) Rubber Reclaiming Works. U. S. Rubber Reclaiming Works, N. Y. Westmoreland Rubber Mfg. Co., Grapeville, Pa.  <b>Agents and Dealers.</b> Goldberg & Rathman, Boston, Mass. Philip McGrory, Trenton, N. J. H. P. Moorhouse, Paris, France. Rubber Trading Co., New York-Boston. Wm. Somerville's Sons, Liverpool.  <b>Scrap Metals.</b> Robert L. Crooke, New York.  <b>Scrap Rubber.</b> L. Albert & Son, Trenton, N. J. Bers & Co., Philadelphia. C. Clifford, Baltimore, Md. Wm. H. Cummings & Sons, New York. Goldberg & Rathman, Boston, Mass. Theodore Hoteller & Co., Buffalo, N. Y. A. W. Leslie & Co., Ltd., London, Eng. B. Loewenthal & Co., New York and Chicago. J. Loewenthal & Sons, Chicago. Philip McGrory, Trenton, N. J. Meyer Bros., Philadelphia, Pa. M. Norton & Co., Charlestown, Mass. San Giacomo Sons, Newark, N. J. J. Schnurmann, London.	<b>Scrap Rubber.—Continued.</b> Schwab & Co., Philadelphia. Trenton Gutta Percha & Rubber Separating Co., Trenton, N. J. Trenton Scrap Rubber Supply Co., Trenton, N. J. United States Waste Rubber Co., Brockton, Mass. M. J. Wolpert, Odessa, Russia.  <b>Substitute.</b> T. C. Ashley, Boston. Joseph Cantor, New York. Carter Bell Mfg. Co., New York. Geo. F. Lafferty, Jr., Elizabeth, N. J. Massachusetts Chemical Co., Boston. Para Recovery Co., Bayonne, N. J. The Rubber Chemical Co., Birmingham, England. Wm. H. Scheel, New York. Stamford (Conn.) Rubber Supply Co. Standard Asphalt & Rubber Co., Chicago. Type & King, London, England.  <b>Sulphur.</b> Battelle & Renwick, New York. T. & S. C. White Co., New York.  <b>Sulphur Chloride.</b> Acker Process Co., Niagara Falls, N. Y. William H. Scheel, New York. George W. Speaight, New York. Stamford (Conn.) Rubber Supply Co.  <b>Valves for Air Goods.</b> A. Schrader's Son, Inc., New York.  <b>Zinc Substitute.</b> Aluminum Flake Co., Akron, O.  <b>Zinc Sulphide.</b> Joseph Cantor, New York. Type & King, London, England.  <b>Zinc White.</b> New Jersey Zinc Co., New York. Stamford (Conn.) Rubber Supply Co.
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